

The MODERN HOSPITAL

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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. VI *June, 1916* No. 6

THE CONVALESCENT FIELD—ITS NEW AND CHANGING BORDER LINES[1]

Country Convalescence Must Broaden Out to Meet the Problems of Cardiacs, Rheumatism, Tuberculosis, Borderline Mental Men, Adolescents, Colored People—Experience Is Guiding Along Sane Channels

BY FREDERIC BRUSH, M. D., SUPERINTENDENT THE BURKE FOUNDATION, NEW YORK

THE hospital efficiencies most needing development are not now internal, but are in the lines of the hospital extensions—in work for health outside of the main buildings. Better dispensary service (with some branch stations), health center work from hospitals, adequate social service, long-term "follow," prevention, convalescent supervision—these indicate the main attracting possibilities of the newer hospital efficiencies. The American hospital is yet greatly underrated as a health instrument. It survives many stresses, grows steadily, and gets funds beyond almost any other organization. The present need is not for so many new, small, and precarious associations, but longer, stronger extension arms to the hospitals.

Hospital efficiency thus covers convalescence, which is taken here to include health increase, health holding, and prevention of health deterioration. Raising the sick, handicapped or subnormal, to their fullest working efficiency, and keeping them there, differs widely, as a plan, from the old admitting, treating, and discharging of patients.

What are the *fields of convalescence* as at present demonstrated or foreseen? The question is coming rapidly into importance. Millions of dollars in this vicinity alone are awaiting, or already planning, expenditure in convalescent lines. We need not here review the long history (mainly in England) of the convalescent home, for it is evident that this country will develop its own types. Roughly—and with much gradation, of course—we may outline our convalescent care as follows:

1. The older type of convalescent home; usually small, taking part pay for services when possible, equipped to give rest and good food, and necessarily admitting but few yearly and from a very restricted class. The work of these homes will probably not increase much. Some are being discontinued with the passing of a supporting personality, or group; others are falling behind in efficiency (poor locations, etc.). Their product will be fairly good, but small, comparatively.

2. The larger convalescent institution; accommodating from 40 to 300 or more, and affording, in differing degrees, nursing and some classification of patients, medical attendance, surgical dressings, recreations, physical therapy, occupational training, etc. These homes may be governmental, or private corporate, or branches of hospitals or organizations. This promises to become quite distinctively an American type of health plant; the formative stage only is entered.

3. The country branch hospital; for years proposed and discussed; significant that it has scarcely been attempted. The hesitancy of managers to try it has been wholesome, probably. Ideas have changed, and there begin to appear more definite and feasible plans for what will be more the suburban branch of the large city hospital, located upon ample grounds (for sure growth, even to becoming the main institution later), within four to twelve miles of the parent (reachable by staffs and visitors), and giving cheaper and better accommodation to a considerable percentage of early transferred patients—as well as standard hospital, dispensary, and social services to the contiguous community. Some con-

[1] This is a paper recently read before the Harvard Medical Society of New York in a symposium on "Hospital Efficiency."

valescents would also be accommodated. Costs should be one-fourth, or more, lower than in the main institution. Centralized managements of extensive health plants is not the least of the advantages instead of many small struggling new institutions. Grace Hospital, in Detroit, is valuably leading in this direction.

4. The pay convalescent home; there is a very moderate but persistent demand for this. A serious gap exists with us between the free home and the often unsatisfactory and expensive private sanatorium. Such place needs to be small, and, above all, partly endowed, exceptionally equipped and managed—its rates from $7 to $20 per week. Pay convalescence as attempted thus far in small houses, usually by nurses, has mainly failed, financially and otherwise.

5. Home convalescence; to be more definitely organized, as a branch of health work, probably in the social service departments, with overlapping avoided.

OUTLINE PLAN:

1. Patients to be chosen, generally, before ready to leave hospital, and certain ones selected for this kind of convalescent care (as certain others would be for the convalescent homes).

2. Patient's home to be arranged in advance, and to be further organized on arrival of patient as to room, bed, air and sun, noises, bathing, rest periods, surgical dressings, visitors, housework, feeding of patient and family, family physician's cooperation, children, and patient's therapeutic and then productive occupation as strength returns. The Boston Dispensary is pioneering in this.

3. Experiment tried best with hospital having well-developed social service, to cooperate rightly in selections, and with one to three special home convalescent workers, in a convenient and limited district.

4. Cost accounting from the start; hence cover enough field to give a typical experiment.

5. Card records and long-term "follow."

Advantages of home convalescence properly directed:

a. Low comparative costs, probably one-third that of institutional convalescence.

b. Continuity of service to the patient. (The added break of going to country convalescence deters large numbers. "Going home" is restorative in many cases.)

c. Home held together.

d. Home educated—bettered.

e. It would cover the great majority who will not, for various reasons, go to convalescent institutions (probably 60 to 80 percent of those needing convalescent care).

6. Convalescence within the hospital; some things can be added here in most hospitals. More use, with classification, of balconies and grounds, table feeding, occupation, libraries—these indicate the ways, especially for the many institutions blessed with acreage; e. g., an inexpensive convalescent camp on the corner of the ample grounds of a large hospital is being considered.

So much for the convalescent plants and their organizations. But *who are the convalescents*—rightly to be sent to these various and increasing homes? Five years ago the list might have read: "Persons recovering from operations or illness, with little or no surgical dressings, and able fairly to care for selves; and certain other deserving persons temporarily distressed and out of place in life."

But the more recent extensions and plans in the convalescent field cover:

1. Surgical dressing cases — and these quite broadly. Wounds heal more rapidly in the convalescent home for various obvious reasons. Sun treatment may be given; most of the irrigations and applications done; physical therapy instituted and continued; the surgeon's cooperation held by phone, letter, or visit; exercises and occupations started which toughen and train and cheer the patient for sooner and surer reentrance on productive life. Motor transportation is successful in many classes of fairly recent operation. At the Burke Foundation we are doing 800 surgical dressings per month, and we welcome nephrectomy, empyema, mastoid, many recent fractures, wounds with drains, etc., etc. Results are most satisfactory.

2. Heart disease. This large problem can be touched here in outline only, but convalescent homes must learn how to let down the bars, measurably, on this most prevalent illness. They cannot well do this (so negative and even disastrous have been results in the past) until the machinery for the proper selection of patients is set up and running; nor until they are themselves equipped with requisite medical and nursing attendance, occupation therapy, etc. Special institutions and means may well be devised for these sadly handicapped (as the trade school for cardiacs of New York), but heart disease has so many grades and is so prevalent in all the zones of life that surely considerable numbers should be convalesced regularly in the larger standard homes.

Three examples of feasibility:

a. Those with fair compensations and reserves should not (as now) be refused because labeled "heart disease," "a murmur," etc., when needing (as so often) *convalescence for other reasons.*

b. Those who just "tire on the job" frequently, with fairly holding compensations, should be given periodic upbuildings, and in this way kept in productive life.

c. Youths should be given first place in cardiac convalescence, and many more beds opened to them. *Youth is to be the main point of attack on heart disease.* Recent experiments of the Burke Foundation and others show, apparently, that country convalescence of cardiac youths

is surprisingly successful, and without very special equipment or precautions.

These three phases have here been entered on. Cardiacs recovering from recent severe attacks should *not* be sent early to standard convalescent homes. They relapse too frequently. Prolonged hospital or house care and "follow," with ambulatory attachment to "cardiac classes," and occupational supervision, is their inadequate best chance now presenting.



Fig. 1. Bird's-eye view of the Burke Convalescent Home, White Plains, New York, which is leading the way toward broader conceptions of convalescent possibilities.

3. Men. We have had almost no convalescent places for them. The need is probably one-half that of women, and is on the average *a surer need*. For example, no convalescence equals in certainty and gratification that of, say, the post-typhoid sailor or laborer, without friends or room or fit clothes, weak and neuralgic, but courageous and sure of happy productivity if he "gets on his pins"—and pretty sure of bad city deteriorations without this convalescent aid.

4. Rheumatism. The situation is somewhat like that of heart disease. Relapses are discouragingly frequent, apparently from just being sent out to convalesce—the mere change. Who cares to feel the responsibility for a single recurrence of rheumatic fever, with its probable end results? Longer in bed, longer about the hospital and the home, and then country convalescence only if specially needed for general up-building, or complications, seems the best course at present. Special institutions have been proposed for rheumatism and the arthritics, but the indications are not yet clear. Much of this class will naturally be cared for along with heart disease, and heart disease is going to be covered in more comprehensive ways in the near future.

5. Tuberculosis. Bone, kidney, and like forms should be quite freely received, and given longer stay than average. And, despite the probable necessity of stating that pulmonary tuberculosis may not be admitted, it will be frequently present in the convalescent institution if the place is giving a high kind of service. Signal benefits may be rendered there in treating and observing, and insisting on full diagnosis, in that large group labeled, "threatened with T. B.," etc. (and who nearly always have it). This is "adult preventorium" work of much importance. Then, there is the small but definite class just returning arrested from the sanatoriums for tuberculosis, and needing (most often for social reasons) a few weeks of continuation care while right environment is being arranged. Even the quiescent, admittedly lung affected may occasionally be accepted, with precautions; for these so often in other ways, and



Fig. 2. A stretch of landscape or vista, where every sound that breaks the silence spells health.

for brief period only, need precisely what the country home can give.

6. Mental convalescence. There are possibilities, rather vague as yet, of bringing into the convalescent field the early, or oft-called "borderline," or "observation" mental conditions, and some of the nervous diseases and habits. The gap in our provision for the treatment of the poor and middle people in these troubles is painfully apparent. It is, however, a most difficult problem.

A crude, but at least debatable, starting program may be outlined as follows:

a. Convalescence in the standard home? No; not only fails, but reduces the good of the place to others. Experience is fairly adequate for this judgment.

b. A very large general convalescent plant with much land might try a separate cottage, with special service, and give partial use of the general occupation, amusements, library, etc. This would be fairly economical, but complicating and doubtful of success.

c. The existing institutions for mental diseases, both state and private, should be outfitted to greatly extend convalescent effort. They have broad lands, separation and camp possibilities, central service and occupation plants, and some "follow" becoming available. The "asylum" stigma is lessening, and will be fairly outworn in time, especially by just this work.

d. The special mental convalescent institution is in many minds. It would take certain patients from asylums and others directly, and should be complete in occupation especially, have moderate pay and free beds, and be really a first-class sanatorium, but endowed for one-half support at least. It might best be near the city, in order to link up closely with normal life through an occupation-employment-sales center, serving several organizations perhaps. The establishment of this latter should precede the convalescent institution. *Success in mental convalescence is going to hinge on occupation;* and occupation therapy is measurably failing everywhere because of *lack of sales outlets for its products.* Costs would be $2 to $3 per day per capita; length of stay three to twelve months; cost per patient, $300 to $1,000; failures many—probably a majority. This gives us pause, and should make us constantly compare the institutional plan with mental welfare work in the homes and in occupational centers, and the use of existing occupations.

7. Adolescence. This vital age of 12 to 16 "falls between" as to institutional care, and for well-known reasons. It should not continue so, especially in convalescence and allied welfare provisions. Thirty beds for boys and a like number for girls have been opened here this year, and results are gratifying. Separation care is desirable for this age.

8. The colored people. Over 100,000 in this community and increasing by thousands each year, with practically not a convalescent bed for them—expensive health policy, of course. We all lose or gain together. A separate small home is the answer. The Burke Foundation is now conducting such a branch, and it is proving to fill a definite need. They respond with peculiar happiness and success to country convalescence.

9. Preventive convalescence (using the latter term broadly). Is only in beginnings. Some fear the building of too many convalescent institutions. With this preventive health upbuilding well under way, there would be needed five beds where now is one. We have tested and estimated that, at lowest, 10,000 adults per year should and would go out for short periods of health building from New York dispensaries alone; a little over 500 may go this year. The dispensaries and the various social services must be the main dependences in finding and sending these patients. The medical-social machinery to accomplish this does not yet exist, or is inactive. This is really the big end of the convalescent job; and scarcely anybody is on it. But good beginnings are being made. Employers, department stores, friends, physicians, various societies, schools, health boards, etc., are cooperating a little. The dispensaries are as yet disappointing in this, and apparently must await special salaried social workers in them.

There are lesser side-lines of convalescence, as the fresh-air day camp, mothers with babies, orthopedics, etc., which we may not here discuss. We have looked over the main convalescent field, with the more recently entered or proposed extensions — surgical dressings, cardiacs, rheumatism, tuberculosis, borderline mental, men, adolescents, colored, preventive. These represent wide expansions. There is danger of overdoing convalescent provision in some directions. The borderlines will best be determined, somewhat slowly, by experience.

The best location for a hospital is outside of but very close to the city, or in an isolated quarter, little crowded with houses and inhabitants, and where the air is easily renewed.—Becquerel.

Among the nations of antiquity the Greeks and Romans have done the chief work in the field of public hygiene. Mank Greek statesmen and philosophers occupied themselves earnestly with hygienic questions, and proclaimed the principle that it was the duty of the state to provide for the health of the people.

In the early centuries all hospitals were of the same general kind, but later they were separated into general and special hospitals. Among the latter were the manicomia, the syphilicomia, or hospitals for venereal diseases, special hospitals for skin diseases, for diseases of children, etc.—B. Bufalini.

The principle of hospital establishments sprang from the realization of Christian philosophy—of that philosophy which, in breaking the chains of slavery, proclaimed all men equal before God, and commanded them to love each other and to assist each other as brethren.—Felix Roubaud.

AN AMERICAN HOSPITAL ONE HUNDRED AND EIGHTY YEARS OLD[1]

Bellevue, of New York, Begun as a Prison and Poor House, the Victim of Graft and Greed for Many Years, Nears Its Second Centennial a Magnificent Pile of Modern Buildings—Its Development and Achievements

BY OUR SPECIAL CORRESPONDENT, NEW YORK

AFTER one hundred and eighty years of service to the sick and injured of New York, Bellevue Hospital is at last to be housed in buildings in keeping with the needs and deeds of this historic old institution. Established by the colonists of New York as a department of the public workhouse, the hospital is now the oldest for the care of acute cases in the United States. When the new buildings providing for 2,250 patients are completed, Bellevue will be the largest as well.

From its origin until 1848 the hospital was simply a department in New York's charitable and corrective system. Not until sixty-eight years ago it was divorced from the penitentiary and almshouse and established as an independent institution. Even then the hospital had to be content with a building that had been designed originally as a poorhouse. This building stands today and is still occupied by part of the hospital. But now, on the one-hundredth anniversary of the completion of this old structure, a group of magnificent new buildings is being erected which, when completed, will rank Bellevue with the foremost medical institutions in the world.

Bellevue Hospital traces its origin in an unbroken line to the infirmary of New York's first public workhouse. This was erected in 1736 and was designed primarily for the confinement of unruly characters; to this end it included a workshop for those sentenced to hard labor, a cage for the refractory, a store room, and living quarters for the warden. The infirmary was incidental. It occupied a small room on the second floor, contained six beds and overlooked the Hudson river, and for many years Dr. John Van Buren was the vititing physician. He was succeeded by his son, Beekman.

This first almshouse-prison-hospital was at the northern outskirts of the town, on the Boston Post Road, near where the City Hall now stands. The two-story structure served for sixty years, and then the conglomerate institution was transferred to larger quarters just north of the present Chambers street. That building, too, was soon outgrown, but it was not until 1816 that a different site was available.

Property for a pesthouse had been acquired by the city in 1794 at Belle Vue on the East river. With the acquisition, in 1811, of adjoining property on Kips Bay, a new group of buildings was erected. These consisted of a three-story structure of gneiss rock for the paupers (which later became the hospital), a smaller structure to serve as a penitentiary, another building to be occupied as a workhouse, and two one-story buildings, each 25x75 feet and containing six rooms, for hospital purposes. The institution was known as the Bellevue Establishment, the name of the locality having been given the institution. The corner-stone of the main building was laid in 1811, but, because of delays during the war of 1812, the structure was not ready for opening formalities until April 29, 1816.

The building for paupers was the largest of the group, and, with the exception of certain additions, stands today substantially as it was on the day the establishment was formally opened. It is 325 feet in length and 55 feet wide, with wings each 100 feet long extending north and south from the central building. The structure originally was three stories high, but after it was converted to hospital purposes a fourth floor and an operating amphitheater were added. Still later an extension to the north wing made the structure L-shaped.

As in the original public workhouse and later at Chambers street, facilities at Bellevue Establishment were such that prisoners, paupers, and invalids lived together. Whatever nursing the patients received was given by prison "trusties" and other unreliables. This intermingling of the unruly, the unfortunate, and the sick had long been recognized as an evil, but it was many years before prison, almshouse, and hospital were finally separated. The first move in this direction came in 1836, when male prisoners were transferred to the new penitentiary on Blackwell's Island. Two years later female prisoners were transferred to the Tombs.

In the meantime the hospital department of the establishment had been moved to a part of the workhouse, resulting in a material increase in capacity. But still further enlargements were necessary, and in 1826 the hospital was transferred to a building which had been erected the year before at the southeast corner of the grounds—what is now the foot of East Twenty-third street—and

[1]Acknowledgment is made to the alumni of Bellevue Hospital, from whose book, "An Account of Bellevue Hospital," published in 1893, much of the historical data and several of the photographs used with this article were obtained.

designed as a pesthouse. Fever patients were moved to the top of the house, and the general ward patients occupied the lower floors. Not until 1837 was a separate pesthouse maintained.

In 1848, the present City Farm Colony having been laid out on Blackwell's Island, the paupers were taken from the Bellevue Establishment, and the hospital was moved into the vacated building. The structure was in a dilapidated condition—the shingle roof leaked, plaster fell from ceilings, doors sagged on their hinges, and regulated ventilation of the wards was impossible. Yet, bad as it was, it was welcome—the hospital was at last free of its pauper-convict alliances.



Fig. 1. The first poorhouse in New York, 1736. The beginning of Bellevue Hospital.

Coincident with the transfer of patients from the old pesthouse, the "city stepfathers" (as certain aldermen of that time were called) decided that the Bellevue grounds were too large; so they "obligingly" purchased all the property lying within the bounds of the East river, Second avenue, Twenty-third street, and Twenty-sixth street, and between First and Second avenues north to Twenty-eighth street, reducing the grounds to two city blocks. When, in planning for the present Bellevue enlargement, it was seen that more ground would be needed, the block to the north, bounded by Twenty-eighth street. First avenue, Twenty-ninth street, and the river was purchased. In 1845 the city "stepfathers" sold eight city blocks to themselves at a price in keeping with the nature of the transaction. In 1904, when the needs of the hospital required more ground, the city had to pay $1,677,983.29 for one block.

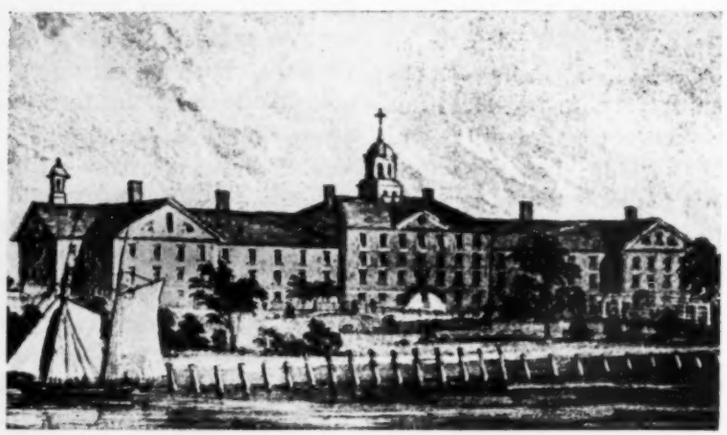


Fig. 2. Bellevue Hospital in 1848.

From the time the paupers were moved to Blackwell's Island, Bellevue has been devoted entirely to the care of the sick and injured. From time to time various additions and improvements have been made to the old gray building. The north wing extension was added in 1855, and during the following year the fourth floor and the surgical amphitheater were built. This was the first operating amphitheater ever planned for a hospital. It provided observation accommodations for 600 medical school students, who were to have the privilege of studying cases in the wards and watching surgical work in the operating room. Later, as demands increased, new buildings were erected on the grounds. One of these was a pavilion for alcoholic patients and another was an observation ward for the treatment of supposedly insane. In 1869 an emergency ambulance service, the first in the world, was introduced by Dr. Edward B. Dalton, who during the Civil War had charge of the ambulance corps of the Army of the Potomac.

In 1902 it was decided by the city authorities to take certain institutions from the jurisdiction of the Department of Charities and control them through a board of trustees. As a result Bellevue, Fordham, Harlem, and Gouverneur Hospitals are now managed by trustees appointed by the mayor on the recommendation of the private charitable organizations of the city. These hospitals are now known officially as Bellevue and Allied Hospitals.

One of the first acts of the board was a recommendation to the city that new accommodations be provided for each hospital.

The plans for the new Bellevue call for twelve pavilions designated by letters from A to M, with J excepted, a pathological laboratory, dormitories for men and women workers, an out-patient department, an isolation building, two amphitheaters for medical and surgical clinics, a boiler house, a laundry, and a garage for the ambulances. Of these, pavilions A, B, I, K, L, and M, the pathological laboratory and morgue, the male dormitory, the laundry, and the boiler house are completed and occupied. They represent about half of the entire plan of reconstruction.

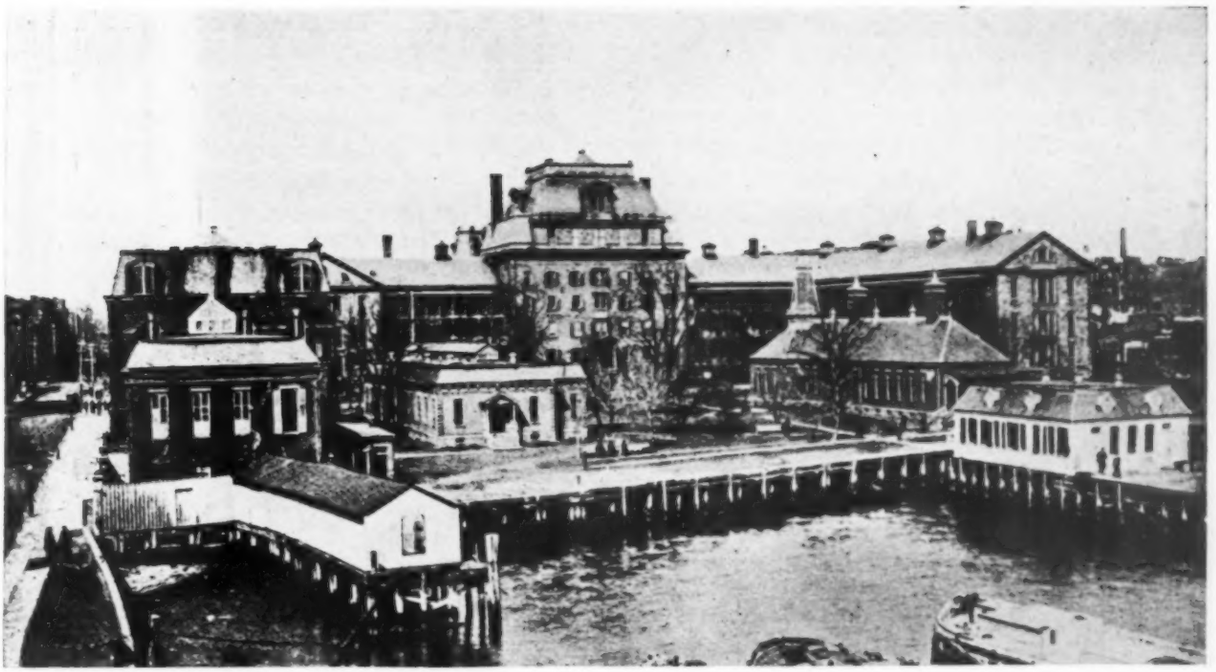


Fig. 3. Bellevue Hospital in 1879.

In the center of the operations stands the old poorhouse-hospital, substantially as it was one hundred years ago, when it was formally turned over to the city. The operating room on the top floor served until last fall, surgical patients are still treated in the wards, and the quarters of the house staff are in the building, as also the administrative offices.

Of the new Bellevue pavilions, A and B, which house the medical, maternity, and children's wards, have been completed and occupied since 1908. The pathological laboratories at the corner of First avenue and Twenty-ninth street have been occupied since 1911.

The laboratory contains the various departments for pathological research, a library for physicians, and a display of specimens, of which the Woods collection forms an important part. The morgue, which occupies the basement and two lower floors of the building, provides every



Fig. 4. Bellevue Hospital in 1893.

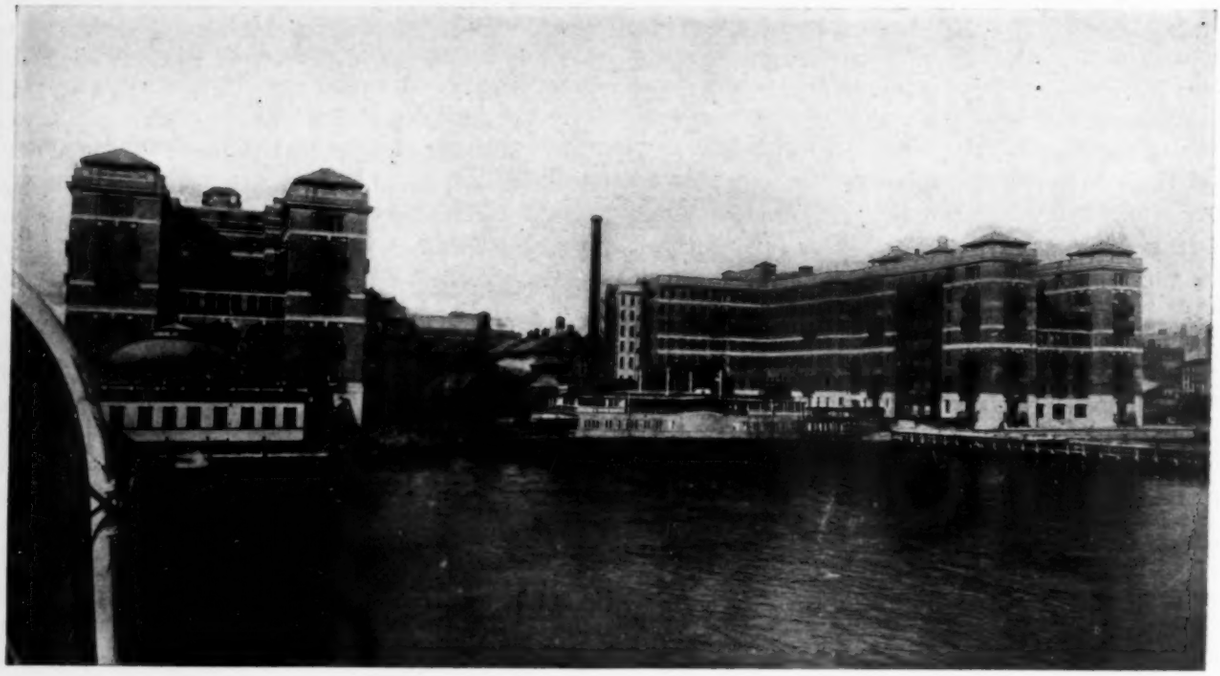


Fig. 5. Bellevue Hospital in 1916. (Photograph by courtesy of the New York Edison Company, to whom acknowledgment is made.)

facility for the care of the dead. Although occupying part of one of Bellevue's buildings, the morgue is not under the jurisdiction of the Bellevue trustees. Instead, it is controlled by the Department of Public Charities, which rents the space. It receives not only the bodies from Bellevue, but from other institutions as well. The unknown dead of the city are held here for identification, and from here unclaimed bodies are sent to the city cemetery or to the medical schools for anatomical purposes. In addition to the vaults for the preservation of bodies, there is a glass-covered section for the display of unknown dead. There are twenty-four slabs in the display section and room for 249 bodies in the morgue. Artificial refrigeration, provided by coils of circulating brine, has taken the place of the cakes of ice of New York's old morgue. There are embalming rooms for undertakers, autopsy rooms for coroner's physicians, a general autopsy room of six tables, with facilities for class demonstrations, and a mortuary chapel for funeral services.

Occupying the south wing of the pathological building is the dormitory for male help. This department is in charge of a Y. M. C. A. secretary, and under his direction various facilities for recreation are provided. Among these are a game room, a smoking room, and a library.

Surgical pavilions L, M, K, and I were completed during the past year. The general surgical wards are in L and M, which occupy the northeast corner of the grounds, overlooking the river and directly opposite the medical pavilion. The operating rooms, eight in number, are on the fifth and sixth floors of pavilion K, which adjoins L and extends westward along Twenty-ninth street. The lower floors of this pavilion have small operating rooms and small wards for the treatment of all special cases. The x-ray department and the department of hydrotherapy are also in this building. Pavilion I, which is an extension of K, connecting with the pathological building, contains surgical wards on the upper floors, an infirmary for the care of members of the medical and nursing staff, and the house staff dining room. In the wings from pavilions K and I are the rooms of the house staff. Seventy-two in number, these rooms are arranged in suites of two, three, and four. On the ground floor of the wing from I is the new surgical amphitheater, having a seating capacity of 200. Pavilions C, D, E, F, G, and H, still to be erected, will contain psychopathic, alcoholic, prison, and children's wards, wards for specialties, an amphitheater for medical clinics, and additional living quarters for the house staff. The administration offices will also be in one of the new pavilions. The next to be erected will be F and G. According to present plans, work will be started this year, and the buildings should be completed in about two years. In addition to these pavilions, a building is planned for the Twenty-sixth street side which will contain the isolation wards and the ambulance house. There is also to be erected the corner unit at Twenty-sixth street and First avenue, corresponding in location with the pathological building. This will house the outpatient department and will provide living quarters for women helpers.

Two buildings of great importance, yet not devoted directly to the care of the sick, are the laundry and boiler house. These are on the Twenty-ninth street side of the grounds and were completed in 1911. The laundry has a capacity of 10,000 pieces of wash a day, and here all the bed linen, the clothing of patients, and the uniforms of nurses and doctors are washed. The laundry is operated throughout by electricity, the installation being composed of seventy-one motors aggregating 240 horsepower. The boiler house adjoins the laundry and provides heat for all purposes, hot water for the laundry and hospital, power for the refrigerating system, and throughout the year steam for the sterilizers in the various operating suites.

Bellevue, both the old and the new, is lighted throughout with electricity, and the various wards present some interesting contrasts in illluminating methods. In the new buildings the indirect system is used exclusively. Opaque reflectors throw the light against the ceiling, resulting in a diffusion that is brilliant enough to permit doctors and nurses to perform their duties, yet so subdued that there is no eye strain on the patients.

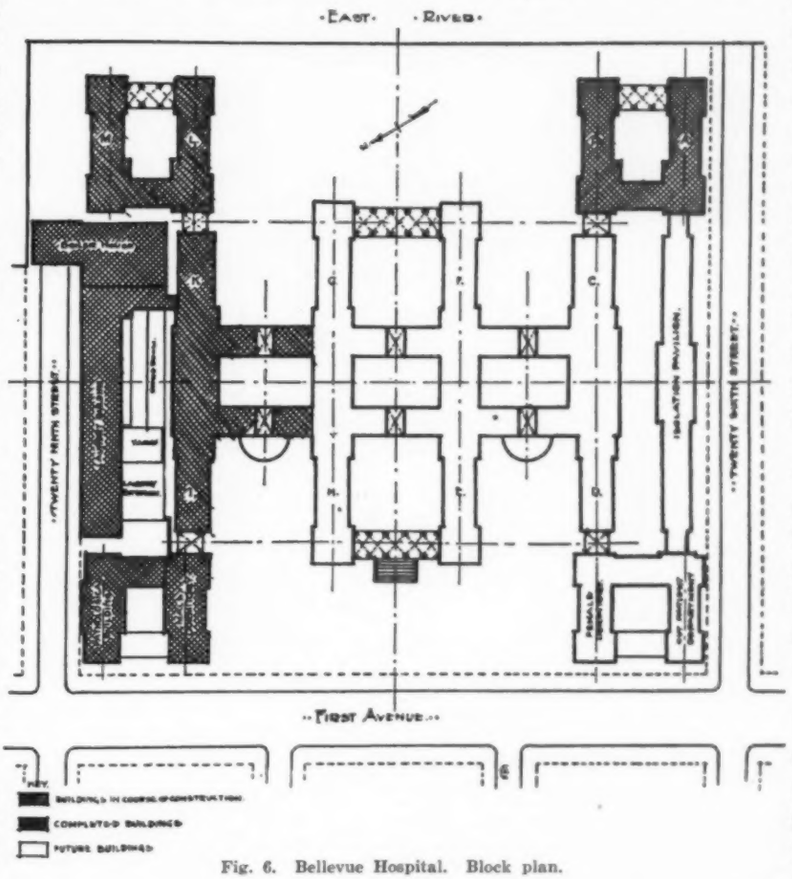


Fig. 6. Bellevue Hospital. Block plan.

In the old buildings, pendant fixtures with their direct light still prevail. Just when electricity was introduced in the old hospital is an uncertainty. It was probably in the late 90's that the installations were made in the wards, but until 1901 the section occupied by the staff quarters depended on gas. During its history, Bellevue has experienced every method of illumination that has been introduced in New York. One hundred years ago oil was used exclusively, then came gas, and finally electricity.

In common with almost all the other city institutions, Bellevue receives its electrical supply from the central station instead of operating its own generating plant. The three other hospitals of the Bellevue group—Harlem, Fordham, and Gouverneur—are exceptions to this rule, as these hospitals generate their own electricity. At Bellevue the power for all purposes during 1914 cost $113,397, or $82 per bed. At the other three the power costs per bed were $140, $110, and $135, respectively. These figures include not only electricity, but all other forms of power required.

During the one hundred years at the present locality and during the eighty years prior to that, Bellevue has contributed greatly to medical knowledge, and has been responsible for many changes in hospital practice, the greatest contributions to hospital administration having been made during the past seventy years.

In 1869 Bellevue established an emergency ambulance service, the first in the world. In 1873 a training school for women nurses was opened, which has since become known as the "mother of training schools" in this country. In 1887 a training school for male nurses was opened, and during 1912 the school for hospital attendants was created to take its place. A school for midwives is also conducted, and for more than sixty years the wards of the hospital have been open to medical students for bedside study. Yet more important than any of these is the fact that the hospital has been responsible for the establishment of the medical school which bears its name.

This, in brief, is part of Bellevue's record, and, with this record on which to build, it is not improbable that the new Bellevue will continue its scientific and administrative contributions on a scale that shall hold the institution to the place it has so deservedly won.

HEATING SYSTEMS FOR HOSPITALS OF VARIOUS SIZES

There Is a Choice of Five Different Principles—Heating the Small Hospital—Heating a Large, Compact Hospital—System for Long-Distance Transmission —Advantages and Disadvantages in Different Types

By MR. FRANK SUTTON, Consulting Engineer, New York

THE selection of a heating system for a hospital is too often treated lightly, and a large number of people pay little or no attention to it, and then, when a system has been installed without due consideration to existing conditions, they wonder why the system has proved so unsatisfactory.

The selection of a heating system is in every way as important as the selection of any other part of the equipment of a hospital, equally from the standpoint of cost of installation, mechanical perfection, and cost of operation.

There are at present a great many systems of heating which can be installed, some of which are applicable to one class of buildings, but entirely out of place in other classes. The writer will endeavor to explain the different systems and their best adaptation in as concise a manner as possible. The principal systems that can be considered would be as follows:

Steam—one- and two-pipe gravity return.
Steam—one- and two-pipe vacuum return.
Steam—so-called vapor systems.
Hot water—one- and two-pipe gravity circulation.
Hot water—one- and two-pipe forced circulation.

Now, which of these systems will the architect or the hospital management select for their building?

The first thing to consider is the size of the building, and whether the institution will be composed of one individual building, or whether there will be several buildings confined to a small radius, or whether the institution will consist of a group of buildings covering considerable area.

HEATING THE SMALL HOSPITAL

It would be well to take up the question of the small hospital building accommodating from 25 to 100 patients. In a building such as this it is very evident that the mechanical equipment would be confined to a very small proposition—namely, the installation of cast-iron heating boilers to generate either steam or hot water, and, if high pressure steam were required for sterilizer work, it would be obtained either by the use of gas-operated sterilizer or a small high-pressure boiler. The high-pressure boiler would not be recommended, as it generally carries with it the employment of a licensed engineer, which is an added item of expense. It would further not be advisable to use a vacuum heating system or a forced hot water circulation system, because moving machinery must necessarily be used in connection with vacuum pumps and water circulating pumps. The question, therefore, would sift itself down to the use of either a plain steam gravity return system or a hot water gravity circulation system.

In connection with the so-called vapor systems, while these systems probably have their advantages, at the same time the writer is of the opinion that there is no particular advantage gained in installing a system in which certain pieces of patented material are required, and where this apparatus is apt, in a good many cases, to become disarranged and get out of order, thereby causing considerable trouble. There are, however, some vapor systems on the market which are claimed by the manufacturers to be very economical and simple in operation, but the writer is of the opinion that the simpler the heating system for this kind of building, the better.

As a general rule, a one-pipe steam system is not particularly satisfactory for the reason that, unless the system is very carefully designed and very carefully installed, there is apt to be trouble, due to the fact that the one line is used for both the steam and the return. The writer is, therefore, of the opinion that a two-pipe steam system would be preferable.

On a small building the question of keeping a constant steam pressure is of vital importance, and it is a matter of some difficulty to do this when the steam plant is operated by the janitor or left to some automatic device, the consequence being that the building is either overheated by the drafts being left open, or cold by the drafts being kept closed, due to nonattendance at the boiler. While this same thing would be true with hot water, at the same time, the hot water being more sluggish in its action, the same degree of variation would not be incurred; the temperature is more even, and in the writer's opinion more satisfactory in operation. I am, therefore, of the opinion that for a small building a plain gravity, two-pipe hot water system is the most desirable kind of an installation. The cost of such a system is only slightly in excess of the steam system, and

without a doubt in connection with the installation of a system in a new hospital building this extra cost would not be felt.

HEATING A LARGE, COMPACT HOSPITAL

The next question to take up would be the installation of the heating system in a building of fair size, such as some of the modern hospital buildings, accommodating from 100 to 300 or 400 patients, but confined to either one large building or a group of buildings occupying such a space as a city block, or a smaller site.

In connection with such a building, any one of the systems mentioned in the first part of this article could be considered, although some of them would not be as satisfactory as others; for instance, there would be no advantage in installing a hot water gravity system, as the circulation would be very slow and it would be considerable time before the radiators responded, and then it would be very necessary in laying out a gravity hot water system to see that all lines were properly pitched in order that the piping would not be trapped, which would instantly cause trouble. It would, therefore, sift itself down to the use of the forced circulation system—that is, the water would be pumped by centrifugal pumps through the building.

The steam system would seem to lend itself more advantageously than hot water in this particular kind of building, but to a certain extent the same objection would be raised in regard to a gravity steam system, due to the length of time it would take for the steam to properly circulate through the radiators. It would, therefore, seem that the introduction of vacuum return valves, and the returns operated by vacuum pumps, would be the logical system to use in a building of this character. Of course, it is assumed that in connection with the mechanical equipment a high-pressure boiler plant would be installed and a licensed engineer would be in attendance.

The high-pressure plant would naturally be used, due to the fact that in addition to the steam required, which would be at reduced pressure for heating work, there is a large amount of steam used for other purposes, such as kitchen and laundry operation and the operation of sterilizers.

The other steam system, which has not been mentioned, is the one-pipe vacuum air line system, in which case the air is supposed to be taken from the radiator through a small air line connecting with some apparatus, such as a vacuum pump or a steam ejector, for discharging the air. This system, in the writer's opinion, is antiquated, and is, as far as known, going out of use and is not recommended. Mention is made of it in this article simply to show what has been done in the past.

In conclusion, therefore, in connection with this type of building, the writer is of the opinion that a two-pipe vacuum steam system would be the thing to use, although there is absolutely no objection to the use of a forced hot water circulating system, except in the increased expense in the cost of installing hot water heaters, as the water used in the radiator must necessarily be heated by steam from the boiler plant.

FOR LONG-DISTANCE TRANSMISSION

The final question to be considered is in connection with the proper system of heating for a group of buildings extending over considerable area. In this instance it seems that the system to be used would be either a two-pipe vacuum steam system or a one- and two-pipe forced circulation hot water system.

It may be confusing to some that the term "one-pipe hot water system" is used in this work. This means that the so-called flow and return mains are tapped separately and two pipes taken from one of these mains and led to the radiator, it being, of course, understood that all hot water radiators must necessarily have two pipe connections, but that a very satisfactory installation can be made with the use of proper controlling valves where the one-flow main can be used for heating a number of radiators.

A vacuum steam system would work in a very satisfactory manner, provided the power house could be located at a lower elevation in order that the returns could be sent back to the pumps by gravity. Some people may ask why cannot the vacuum pumps pull returns up hill; and in some cases this has been tried, but it is most unsatisfactory to try to pump a mixture of hot water and steam vapor up grade.

GRADES ARE IMPORTANT

Therefore, in laying out a steam system for a group of buildings, it is extremely important that the grades be so arranged that the returns will flow by gravity the entire distance. This is not so in the case of forced hot water, as a hot water circulating system, where the water is circulated by centrifugal pumps or by other form of pumps, the system is absolutely independent of grades, and it is immaterial where the power house is located—that is, a group of buildings could be in the valley, with the power house on a hill if so desired, but there would be absolutely no difference in the operation of the system. Another advantage with forced hot water would be that the mains, strange to say, would be smaller than steam mains, whereas the radiators would be somewhat larger.

The cost of installation of the forced hot water

system would be about the same as the cost of installation of a first-class vacuum return system. The writer is, therefore, of the opinion that more satisfactory results can be obtained by the use of forced hot water circulation in a group of buildings, such as described, than with any other system.

There are one or two other important points to be considered in connection with a heating system where a hospital either takes over some old building which has formerly been used for other purposes, or where the present steam system has become inoperative, due to the lines filling up with rust or other material.

In many instances, instead of taking out the system and installing a new one, a very satisfactory operation can be obtained by turning the gravity steam system into a vacuum return system, in which case the vacuum pumps can help out to a considerable degree by pulling the condensation through the lines. This is a good point to remember in connection with an old installation.

THE NEW WESLEY HOSPITAL, KANSAS CITY, MO.

First of a Large Group of New Modern Hospitals in the Making, This Institution Has Some Specially Notable Features—Built on the Block Plan—Has No Service Rooms on the Floors—Cost Extremely Low

By L. B. SIMPSON, of Keene & Simpson, Architects, and R. E. CASTELAW, M. D., Superintendent

THERE comes a time in the development and growth of every community when it is necessary to make a survey of all public and private activities. An inventory must be made, stock taken, books balanced; it must be definitely determined just how things stand. The cost of service must be established, the leaks and sources of waste located, and new standards of efficiency adopted. The citizens of Kansas City, both professional and lay, invoiced the local hospital situation a few years ago and decided that it was time for a complete overhauling. As a result of this investigation, this city has either just completed or in the course of construction a half dozen fine modern hospital buildings. These new plants have doubled the capacity of the private hospitals, and, as might be expected, have completely upset old established methods.

Until within the last few years neither of the Kansas Citys, with a population of at least half a million, could present a hospital that in any way met the demands made on it. The profession and city had entirely outgrown the available hospital service—the buildings were old, unsafe, and unsanitary; and, without assuming a critical attitude in the matter, all of those interested agreed that there was nothing to encourage the people of this locality to send their sick to our hospitals for care, and neither was there anything to stimulate real scientific effort on the part of the local profession. A complete reconstruction and reorganization of plans to furnish hospital service to the people of this community was demanded. New, fireproof sanitary buildings must replace the old structures. The ethical standards must be raised, the laboratory facilities increased, and the nursing service improved. The new order of things should correct many of the evils which have existed so long in Kansas City, and not only furnish the opportunity to the local profession for some genuine scientific effort, but the entire country tributary to this city will be vastly benefited.

The first of the new group of the larger buildings to be opened to the public was Wesley Hospital, the subject of this sketch. This institution was ready for occupancy and was opened to the public January 1, 1916. Wesley Hospital succeeded the Women and Children's Hospital, which passed out of existence in 1907, and the present corporation was organized by Dr. J. Archie Robertson in the fall of that year. The new hospital is a result of the demand of the patrons of the institution for a larger modern plant.

Wesley Hospital is a down-town hospital, being located at Eleventh and Harrison streets, just a few blocks from the retail shopping district. It is conveniently located to seven street car lines, four of which pass within one block; two are direct Kansas City, Kansas, lines, and another is a suburban line from Independence. Eleventh street is also the principal thoroughfare east and west for all vehicle traffic. The lot upon which the hospital is located has a frontage of 160 feet on Eleventh street and 100 feet on Harrison street. The main entrance to the hospital is on Eleventh street and almost on the street level.

The building is what is known as the block plan, 155 feet long by 45 feet wide, five stories high, and without a basement. The building is a fireproof structure, with reinforced concrete frame. The exterior is of dark wire-cut brick, with terra cotta trimmings and marble columns at the main entrance. Advantage was taken of the slope on Harrison street, which provides a driveway to



Fig. 1.

the ambulance entrance on the north side of the building and on the second floor of the hospital; which plan delivers the patient direct to the elevator without disturbing the offices or reception room on the first floor. On the Eleventh street side the main entrance is only a foot above the street level, and the elevator is reached through the reception hall without climbing stairs.

On the first floor are located the superintendent's office, the bookkeeper, and telephone switchboard, general dining room, main and diet kitchens, graduate nurses' rest room, sewing room, class room, pharmacy, isolation room for emergency, contagious, or noisy cases, and a room for the house physician. On the second floor is an emergency operating room at the ambulance entrance, which is also used as an examination and cystoscopic room. The west wing of the fifth floor is the main operating room suite, while the east wing is given over to maternity service. On all floors are also located a chart and signal room, small diet kitchen and service room.

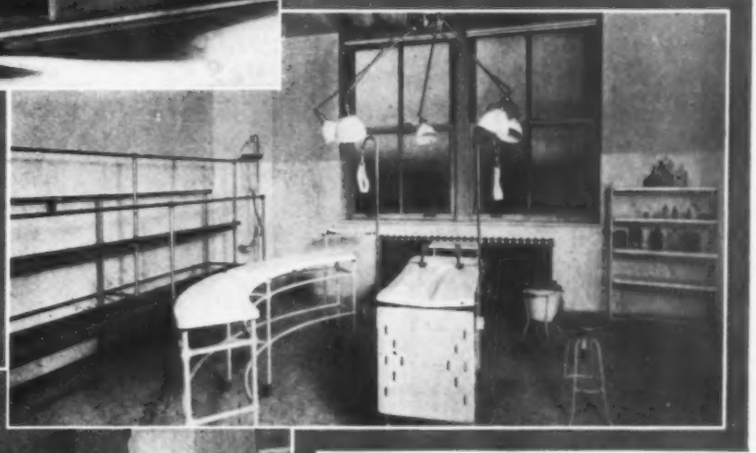


Fig. 2.

At the east end of each floor is a large sun room, equipped with swinging windows. The sun rooms are connected by fireproof stairways, and can be shut off from the hospital corridors by heavy fire-

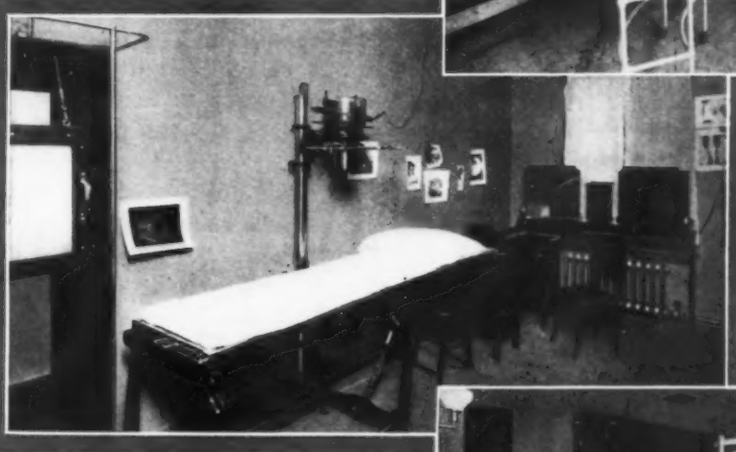


Fig. 3.



Fig. 4.

Wesley Hospital, Kansas City, Mo. Fig. 1—Main entrance. Fig. 2—One of the three operating rooms. Fig. 3—Part of the x-ray unit. Fig. 4—Main kitchen.

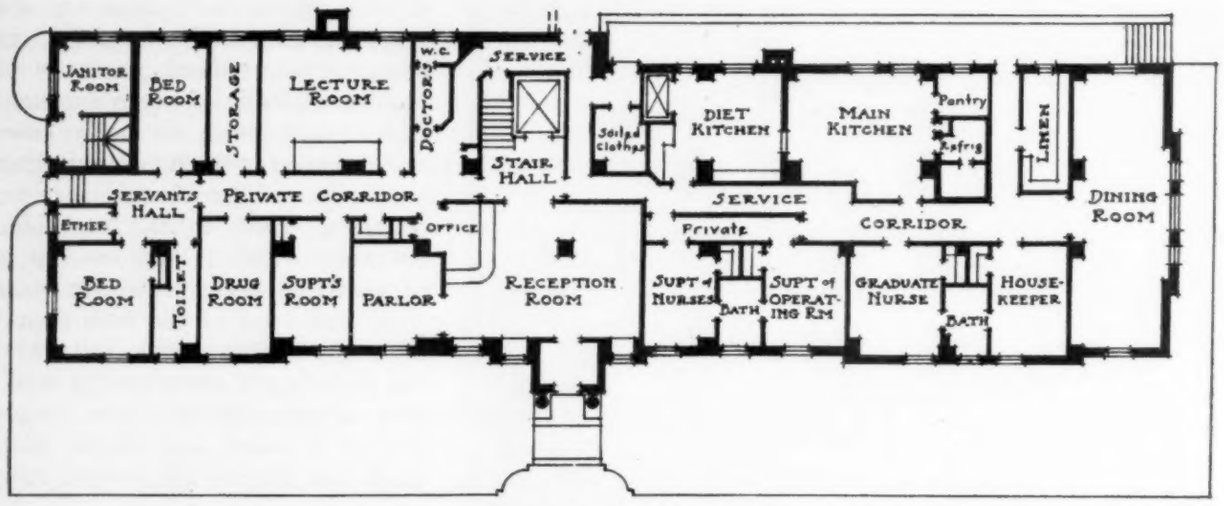


Fig. 5. Wesley Hospital. First floor plan.

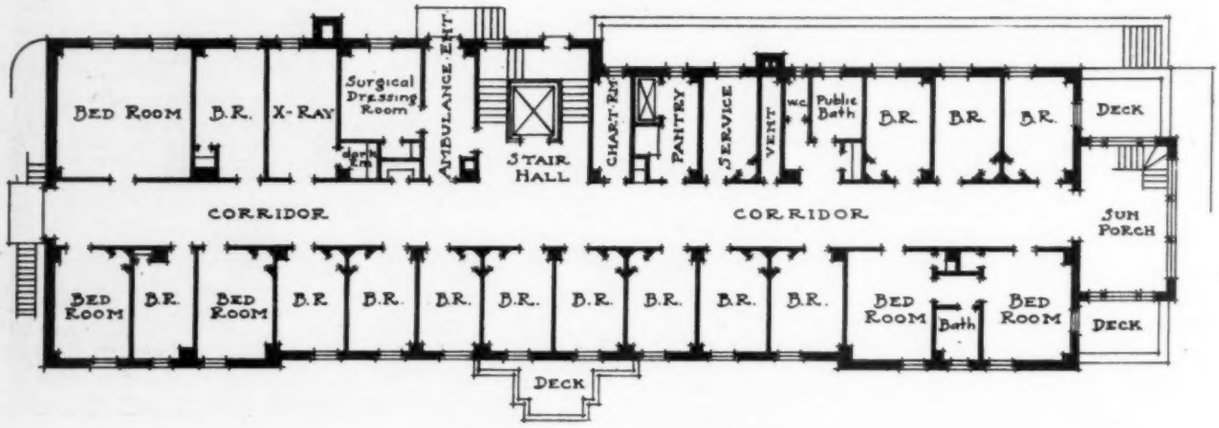


Fig. 6. Wesley Hospital. Second floor plan.

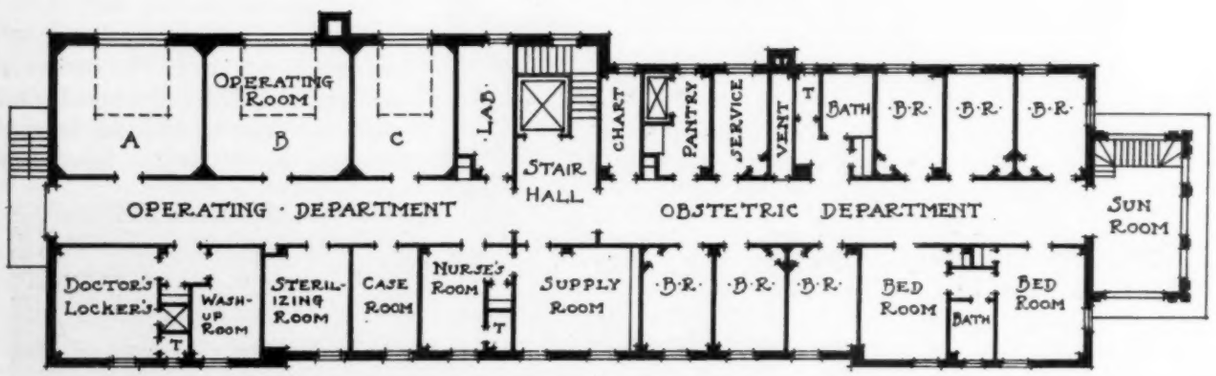


Fig. 7. Wesley Hospital. Fifth floor plan.

proof doors, which provides additional fire protection.

The operating department consists of three large operating rooms, with an abundance of unobstructed north light. Each room is equipped with a gas and oxygen outfit, the supply for which is piped from a main tank in a closet provided for that purpose in another part of the building. The floors of the operating rooms, the hall, and sterilizing room are 6-inch hexagonal vitreous tile, and the wainscoting is of marble extending 8 feet from the floor. The walls are of extra hard Keene cement. The doctors' dressing room is equipped with shower bath and individual steel lockers. The washup room is opposite the operating rooms and has the foot-regulating fixture on bowls. Two work rooms for the nurses, an instrument case room, the hospital laboratory, and a steam pipe closet for heating blankets complete the suite.

The trash chute is located near the center of

the building and has an outlet on each floor. Each opening is covered by a cast-brass nickel-plated hinged door, fitted with a rubber gasket, which insures an absolutely tight door at all times. The chute proper is of vitreous sewer pipe, which leads to the garbage burner in the engine room. Two galvanized iron linen chutes, one in either wing, lead to soiled linen rooms on the first floor. A complete intercommunicating telephone system connects all departments. A refrigerating plant provides three tons of ice daily, and cools the floor and kitchen refrigerators. Bubble drinking fountains tap the cooling system on each floor and furnish cool water for general use.

Each floor is equipped with the Holtzer-Cabot system of nurse calls. All door frames are steel, with sides of the frames forming a casing flush with the plaster. The doors are solid slab in wood and metal, and, aside from these wooden doors and some of the windows, the only wood in the building is the shelving and the furniture. The floors of the rooms are cement, with a cement hardener, and the floors of the corridors that are of cement are covered with battleship linoleum. The partitions are steel studs, plaster boards, and hard plaster. The inside of the building is painted with three coats of lead and oil.

The rooms are ventilated into the corridors, and then into a large ventilating shaft near the center of the building. This shaft is also used to run pipes and wires between the floors. A cast-iron metal platform is provided at the level of each floor for workmen to stand on when making repairs or alterations in the shaft.

Two rooms on each floor are provided with a private bath or can be thrown en suite. Six rooms on each floor are equipped with telephones and lavatories. All other rooms are roughed in for future lavatories and telephones. Each bed room is equipped with an examination light and semi-indirect lighting fixtures.

There are no regular diet kitchens on the different floors, as all the food is prepared in a large diet kitchen on the first floor. At serving time labeled trays are loaded on carts of sufficient size to serve at least a half floor. These are dispatched on an electric elevator, which is controlled entirely in the main diet kitchen. This plan has many advantages, and there is little or no complaint about the food being cold.

The original plan for this plant provided a basement under the entire building, but a more careful analysis of the lay of the lot demonstrated that a scheme could be worked out which would provide at least five additional bed rooms at the same cost if the basement plan were abandoned. There is, however, under the northwest corner of the building a small basement, in which are located the heating and other mechanical devices. The equipment there consists of two large boilers of sufficient size to meet the demands of any future addition to the building, the refrigerating plant, garbage burner, and a small high-pressure boiler which furnishes steam for sterilizers and steam tables. The heating plant is of the two-pipe vacuum system. The engine room is completely shut off from the hospital, and can be reached only by first stepping entirely outside the hospital and then to the door leading to the engine room. The hospital elevator is automatic, and power is furnished by a 20-horse power motor.

The capacity of the hospital is 105 beds. The cost of the building, ground, and equipment was $135,000.00. The building is designed to carry two additional stories containing 27 beds each. Space is also provided to the north of the present building for an addition of a wing 40x60 feet. A detailed statement of the cost of construction and equipment follows:

Contract on building	$60,000.00
Plumbing and heating	11,000.00
Electric wiring	3,000.00
Total	$74,000.00
Screens	$ 750.00
Refrigerators	500.00
Cooling plant	2,250.00
Hardware	800.00
Electric fixtures	800.00
Weather strips	500.00
Elevators	4,500.00
Shades	150.00
Total	$10,250.00
X-ray equipment	$ 2,750.00
Sterilizers	1,400.00
Kitchen equipment	1,200.00
Furnishings	20,000.00
Total	$25,350.00

The cubic foot cost was 20 cents. The cost of equipment per bed was about $225.00.

The nurses' home is located on the north side of the lot, facing Harrison street, and is connected with the hospital by a tunnel, which passes under the ambulance drive. The basement floor of this building is on the same level with the first floor of the hospital. The home is 25 feet wide by 112 feet long, and has accommodations for sixty nurses. The architecture and general construction match the hospital. This building contains store rooms and a few sleeping rooms for hospital help. It will be heated by the hospital plant, and all pipes and conduits will pass through the tunnel which connects the buildings. The cost of this building, with its equipment, was $20,000. The cubic foot cost was about 12 cents.

The affairs of the hospital will be under the immediate direction of the superintendent, who will

report to the board. The training school and nursing service will be in charge of the director of the school. A salaried resident physician and pathologist has charge of the hospital laboratory, and will be at the service of the attending physicians.

The Wesley Training School for Nurses was the first school in this section to adopt the three-year graded teaching course. The school has a capacity of sixty pupils, and every effort is made to maintain a high standard of entrance requirement and conduct a plan of teaching that will keep the school in the first class. A carefully prepared course in hospital dietetics and operating room technic are given special attention. The school faculty is selected from the attending physicians, and paid teachers are employed in the elementary branches.

For the present the service will be open to the recognized ethical members of the profession. Some time in the future it may be decided to close the staff, or at least a portion of it.

It is estimated that about 90 percent of the work is surgical, but complete diagnostic equipment has been provided to meet the requirements of all cases. The x-ray and photographic rooms are especially well equipped.

SOME GLARING FAULTS IN HOSPITAL CONSTRUCTION

A New Building in a Large City, With a Board of Learned and Experienced Business Men, Practiced False Economies, Wasted Much Money, and Got a Poor Hospital

By MR. CHARLES F. NEERGAARD, Brooklyn, N. Y.

THIS is the story of what a layman saw—one of a building committee planning a new hospital. To learn what to do and what not to do, I visited many new hospitals to profit by the experience of others. This tale deals with a nearly completed hospital in a large city, and, while necessarily frank in its criticism, is written solely with the sincere desire to help others who may be concerned with hospital construction. Should any who are interested in this particular institution recognize it from the description, will they accept the writer's apologies for his presumption?

The site was an entire block in the central portion of the city. The work had been started three years ago. It was not a large plant. The administration building and a single wing under construction should easily have been erected in a year. They were still months from completion. What caused the delay I do not know, but delays in building are expensive. There were pleasing features about the design, but, as this article aims to draw a lesson and point a moral, I shall confine myself to the faults—which were many and glaring.

In building an institution with public funds or with charitable bequests, I take it as an axiom that the money put into buildings and equipment should be expended with the same careful consideration as the investment of endowment funds, which are carefully guarded by law. A wealthy benefactor may permit elaborate architectural features in a memorial building, but reckless extravagance should be proscribed in an institution erected by public subscriptions. This organization was conducting a wide-spread campaign for funds to complete their plant at the time of my visit, which would indicate that the extravagance and structural mistakes of which I write are properly open to criticism.

The administration building was semicircular in shape and one story in height above the basement. Of the available floor space on the main floor, two-thirds was devoted to an ornate entrance foyer—most charming, but most inappropriate if expense was any consideration. Its wealth of plaster panels, pilasters, and fancy cornices were expensive to execute because of the many and graceful curves in the design. The wainscot was of imported Italian marble, which must have cost $2 or $3 per square foot. The remaining one-third of the available space was divided between a corridor connecting the wings and a small administration office, lighted only by an overhead skylight. Surely the working force was entitled to some windows for light and ventilation. It seems inexcusable that such an extravagant architectural design for this building should have been accepted by a board of trustees who had not sufficient funds in sight to complete their plant.

The ward unit was two stories in height above the basement, with an elaborate solarium on the roof. The rooms and wards, of themselves, were

[Editor's Note—Mr. Neergaard is trustee of a Brooklyn hospital, and also the president of a large building corporation. He prepared this article at the special request of The Modern Hospital, and, in closing his letter transmitting the article, says: "My closing suggestion, that a practical builder go over the plans, or be a member of the Building Committee, would, I think, do more to insure satisfactory results in hospital construction than almost anything else. In all of our own work we have treated the architect as a subcontractor—that is, he has done the designing and drafting work after we had laid out the floor plans. We have never given the architects the supervising or any control over the practical engineering work. By this method we have been quite successful in turning out practical buildings that have come reasonably close to the amount of money that has been appropriated. My experience has been in the line of residence, school, and factory buildings rather than in hospital work, but I feel sure that the greater the problem the more successful would be this method of attacking it."]

well proportioned, save that the ceilings were unnecessarily high, and a dead air space above the ventilating points was a bad feature. No provision was made for natural ventilation, and no transoms were provided at doors or windows, but the touch of the "expert engineer" was everywhere all too apparent.

The mechanical ventilating plant was of the most elaborate and magnificent proportions, seemingly large enough for an office building. Two huge fans were located on the top floor to pull the air through the rooms through ducts opening 4 or 5 feet *below* the ceiling, and a mighty machine in the basement served to warm and wash the incoming air and force it up through another set of ducts in the lower part of the walls. With light on three sides, in a small two-story building, why all this elaborate installation when natural ventilation is so available and so inexpensive? This plant may be all right, but I understand that, of the many mechanical ventilating equipments of this sort in hospitals throughout the country, none are operated satisfactorily and economically, and one open window breaks the circulation. Considering the maintenance cost alone, could such an expensive installation be considered a wise expenditure of funds?

The corridors were some 14 feet wide, and this in a ward wing having not over 40 beds to a floor. Spacious, beautiful, but every foot costs money to build and maintain, and every added foot over and above the necessary minimum is only an extravagance.

I noticed many stains and marks of dampness on the outside walls, and at an unplastered spot discovered the reason. The walls were not furred, the plaster being applied directly to the brick. True, a course of hollow brick (not tile) lined the wall, coated with some waterproofing compound. This may for a time keep out bad leaks, but it will not insure against seepage and sweat from condensation. Why, oh, why, will architects persist in using this faulty form of construction, and in a hospital, of all places, where dampness means unhealthful conditions, and is unpardonable! It may pass in factories or in a cheap speculative building, but never in a hospital. A furred air space between the outside wall and plaster is the only safe protection against dampness, and should be insisted on in every hospital building. A china pitcher or a metal pail is waterproof and watertight, but fill it with ice water on a summer's day and see how the outside is soon covered with moisture; a wall acts the same way. Over the top floor corridor was an unventilated light well, roofed over with glass bull's-eyes, which I predict will be a source of constant annoyance from moisture and sweat, which was present even then on a bright, sunny day.

Many features covered by the specifications showed reckless disregard for economy. The door trim throughout was of white enameled iron. These are at least double the cost of an appropriate wood trim. Many of the frames were chipped, discolored, and rusted from the dampness in the plaster. Once the enamel is chipped off, it cannot be properly repaired and will always show a patched job. The floors were of terrazzo, with Tennessee marble borders. The stairs had marble treads, with white cement risers. Imagine the labor of keeping those risers spotless. The wainscot in the baths and toilets was of Tennessee marble; fine, but unnecessarily expensive.

The plumbing and heating equipments, while of the most expensive quality, were installed in a manner which would hardly be tolerated in a tenement. It really seemed as though the architect and the engineer, if the work was so divided, had no speaking acquaintance, and that the plans were drawn with no consideration for piping. Practically all of the soil pipes and traps from the upper floor were exposed in the ceiling of the floor below. Imagine an operating room with a large trap and an 8-foot run of soil pipe pendant from the ceiling! Yet here it was! The vapor heating plant, which supplemented the warmed air ventilating system, showed the same disregard of the A B Cs of good installation. The risers and radiators in many instances had apparently no preconceived relationship. Instead of close connections, the feed and exhaust lines ambled aimlessly around the base. In many of the rooms the radiators were hung 6 feet above the floor, their permanent location. The reason for this I could not fathom. Certainly the disadvantages were apparent. Imagine a trained nurse of even average height having to reach over 6 feet in order to operate a radiator valve, and, besides, the rambling pipes had not only to follow the base, but go up from the floor to the radiators and back. Surely common sense, even if experience was lacking, should have tabooed such conditions in a hospital. Another flagrant example of wasted money was displayed in the heating plant. A temporary boiler was set up in a temporary outside building to dry out the plaster and heat the hospital until the permanent plant could be designed and built. Surely foresight should have dictated at least a permanent heating unit instead of wasting $5,000, which I was told the temporary installation cost.

In the basement of the administration building was the engineer's room, housing vacuum cleaner, sewer pump, brine pump, and the like. It was a dark room, with no outside light and ventilation,

although such might readily have been provided. The only opening was the doorway, framed in the same expensive enamel trim as the rooms above. Now, the engine room is usually a hot place, even where there are no boilers, and ventilation is essential. To accentuate the natural heat from the engines, there were provided six radiators to keep the engineer comfortable, and radiation costs at least $1 a foot. The engineer's and male help's toilet adjoining was entered through the same enameled iron doorway, and was wainscoted 6 feet high with the expensive Tennessee marble. No false economies for the engineer's department.

To a man who has had experience in building, these examples of mistakes and extravagances, which so often occur, may sound familiar. In a hospital directed by a board of trustees they seem inexcusable. To one of experience they are a strong indictment of either the ignorance or incompetence of the architect, and show a lack of proper study of the plans, specifications, and costs before letting contracts and proceeding with the work. Surely those responsible for this hospital can hardly face their public with equanimity when they see the result of their work, and the pity of it is that 90 percent of these faults might have been foreseen and avoided by the employment of a competent architect, or by giving a practical builder an opportunity to pass on the plans and specifications before their final adoption.

Planning a hospital plant is the most complicated of architectural and engineering problems. It unites all of the features of a hotel with the technic of hospital treatment and administration. It must combine the practical and the sanitary to a high degree, not neglecting the esthetic, nor disregarding the funds available. To such problem should be brought trained minds, with practical experience and judgment. In the writer's most humble opinion, the most valuable member of a hospital building committee would be a disinterested practical builder.

MUNICIPAL RECEIVING HOSPITAL FOR DETROIT, MICH.

Institution Built in the Heart of the Business District Intended to Care Immediately for Emergencies and to Be Clearing House for the City Hospital—Psychopathic Ward One of the Special Features

By JOHN SCOTT, of John Scott & Co., Detroit, Architects

THE new Receiving Hospital for the city of Detroit, completed for the Board of Poor Commissioners, is intended for the care and treatment of emergency cases and as a clearing house for the general city hospital.

Under the past arrangement the commission had agreements with different hospitals in the city and distributed patients as they found accommodations available for them. In cases of accidents, prostrations, or other emergencies the patient was removed by the police patrol or the first ambulance that arrived to the most convenient hospital, often resulting in confusion and delay. The new Receiving Hospital is equipped with an adequate ambulance service, which will obviate these difficulties.

The hospital building is located in the center of the city on the northeast corner of Macomb and St. Antoine streets, a four-story building 168 feet by 51 feet, with a wing on the north 47 feet by 56 feet. This wing contains the receiving and operating sections and psychopathic wards. In the main building are the administration offices, sick wards, and quarters for the staff.

The building is of steel and concrete fireproof construction, finished on the exterior with cream-colored brick and stone. The basement, 10 feet high in the clear, is well out of the ground, admitting windows of ample size for light and air to the power plant, kitchen department, and laundry. The building is steam heated by a vacuum return line system from two boilers in the north wing. The pumps, filters, and heaters for the water supply of the building are located in the boiler room. The coal bunkers are outside the wall of the building.

The kitchens and supply and service rooms are in the east end of the main building, with a separate entrance from the outside to the receiving room, which connects directly with storage rooms and refrigerators adjacent to the kitchens. The arrangement is designed to facilitate the preparation of the food and the transportation to the three automatic dumbwaiters serving the different sections of the floors above. In this section of the basement the dining rooms for doctors and nurses are also located.

The laundry and sterilizing and dry rooms are placed in the west end of this wing, and are equipped with modern motor-driven apparatus. Adjoining the sterilizing room is a locker room for the storage of the patients' clothes until their discharge from the hospital. Other rooms in the basement are a large experimental laboratory, re-



Fig. 2.

frigerating and ice-making machinery, and store rooms. The suspect rooms and mortuary chamber under the receiving section are connected with a separate stairway to the outside and to the first floor.



Fig. 3.

The general administration offices are just off the main entrance on Macomb street, and the patients' and receiving entrances are from St. Antoine street. A study of the arrangement of these entrances will explain the operation of the hospital as developed by the plan.



Fig. 1.



Fig. 4.

The ambulances unload under a covered porch, connecting directly with the waiting room and doctor's examination room. Immediately connected with these are two bath rooms and a completely equipped minor opera-



Fig. 5.

Receiving Hospital, Detroit, Mich. Fig. 1—Exterior view. Fig. 2—Operating room; note lighting fixtures. Fig. 3—Men's ward. Fig. 4—A reliable feature of the hydrotherapeutic rooms. Fig. 5—The kitchen.

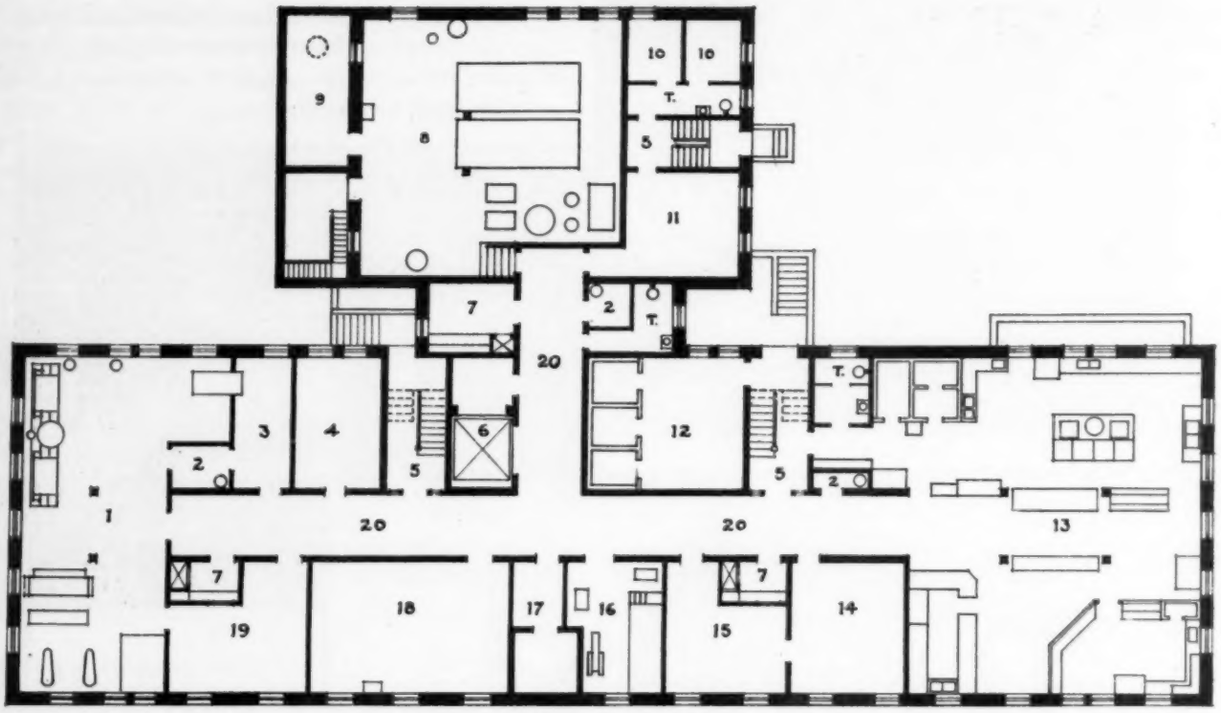


Fig. 6. Receiving Hospital. Basement plan.

1. Laundry.
2. Soiled clothes room.
3. Infected clothes.
4. Patients' locker room.
5. Stair hall.
6. Elevator.
7. Service room.
8. Boiler room.
9. Coal bunker.
10. Suspect room.
11. Morgue.
12. Receiving room.
13. Kitchen.
14. Nurses' dining room.
15. Doctors' dining room.
16. Machine room.
17. Store room.
18. Laboratory.
19. Linen room.
20. Corridor.

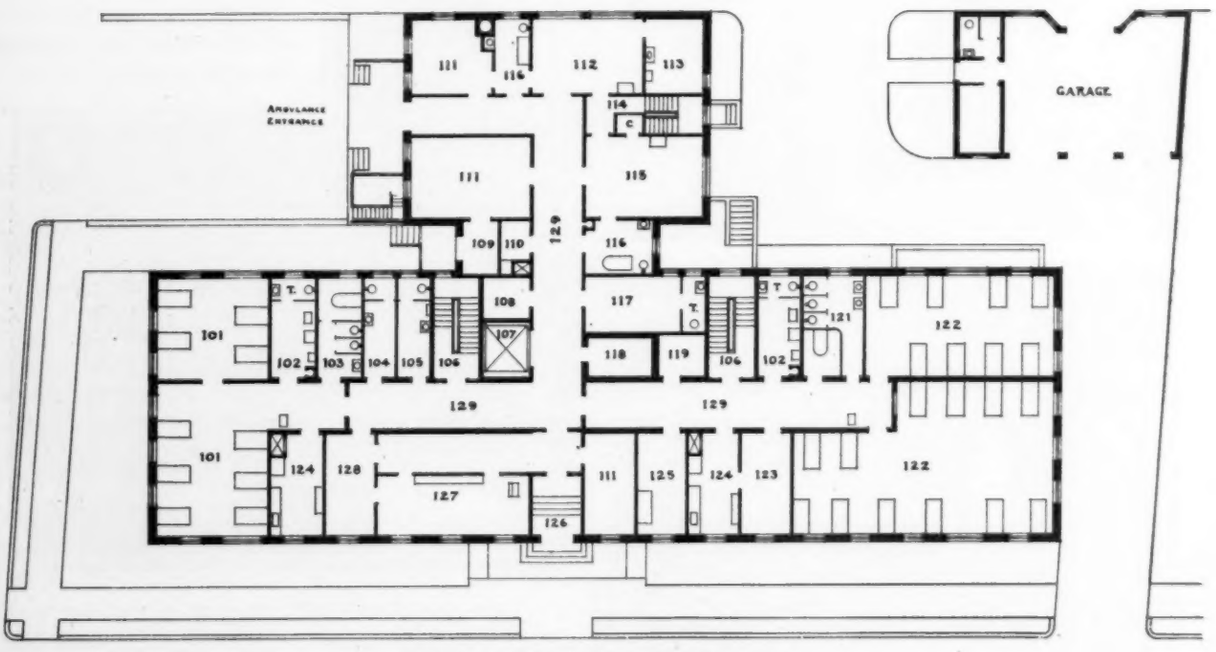


Fig. 7. Receiving Hospital. First floor plan.

101. Women's ward.
102. Sink room.
103. Women's toilet and bath.
104. Women's toilet.
105. Men's toilet.
106. Stair hall.
107. Elevator.
108. Store room.
109. Ambulatory entrance vestibule.
110. Clothes room.
111. Waiting room.
112. Emergency operating room.
113. Sterilizing room.
114. Stair to detention rooms and morgue.
115. Doctors' examination room.
116. Bath room.
117. Visiting doctors' room.
118. Vault.
119. Linen room.
121. Men's toilet and bath.
122. Men's ward.
123. Men's dining and day room.
124. Serving room.
125. Men's private room.
126. Entrance.
127. General offices.
128. Superintendent's office.
129. Corridor.



Fig. 8. Receiving Hospital. Second floor plan.

201. Women's ward.
202. Sink room.
203. Women's toilet and bath.
204. Women's private room.
205. Stair hall.
206. Elevator.
207. Store room.
208. Recovery room.
209. Anesthetic room.
210. Supply room.
211. Nurses' room.
212. Minor operating room.
213. Operating room.
214. Sterilizing room.
215. Instrument room.
216. Doctors' examination room.
217. X-ray room.
218. Linen room.
219. Dark room.
220. Men's bath and toilet room.
221. Men's ward.
222. Men's dining and day room.
223. Serving room.
224. Men's private room.
225. Women's dining and day room.
226. Corridor.

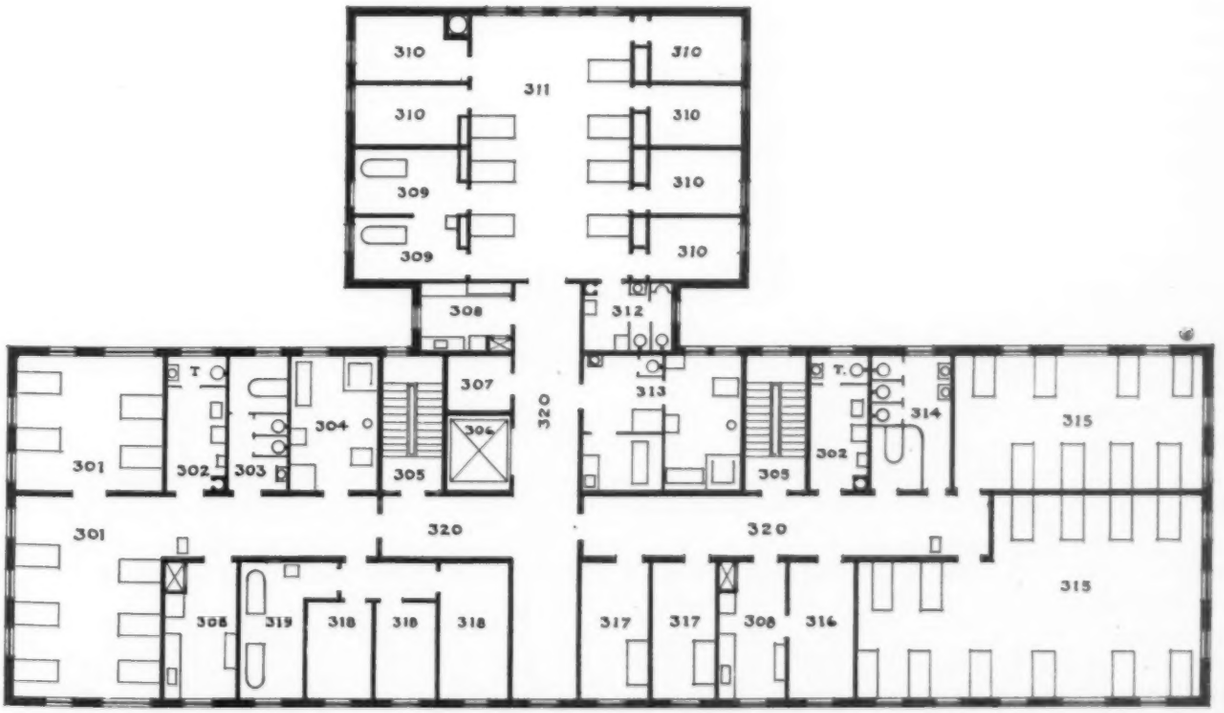


Fig. 9. Receiving Hospital. Third floor plan.

301. Women's ward.
302. Sink room.
303. Women's toilet and bath.
304. Women's hydriatic room.
305. Stairway.
306. Elevator.
307. Store room.
308. Serving room.
309. Men's continuous bath.
310. Men's disturbed ward.
311. Men's psychopathic ward.
312. Toilet and sink room.
313. Men's hydrotherapeutic department.
314. Men's toilet and bath.
315. Men's ward.
316. Men's dining and day room.
317. Men's private room.
318. Women's disturbed ward.
319. Women's continuous bath room.
320. Corridor.

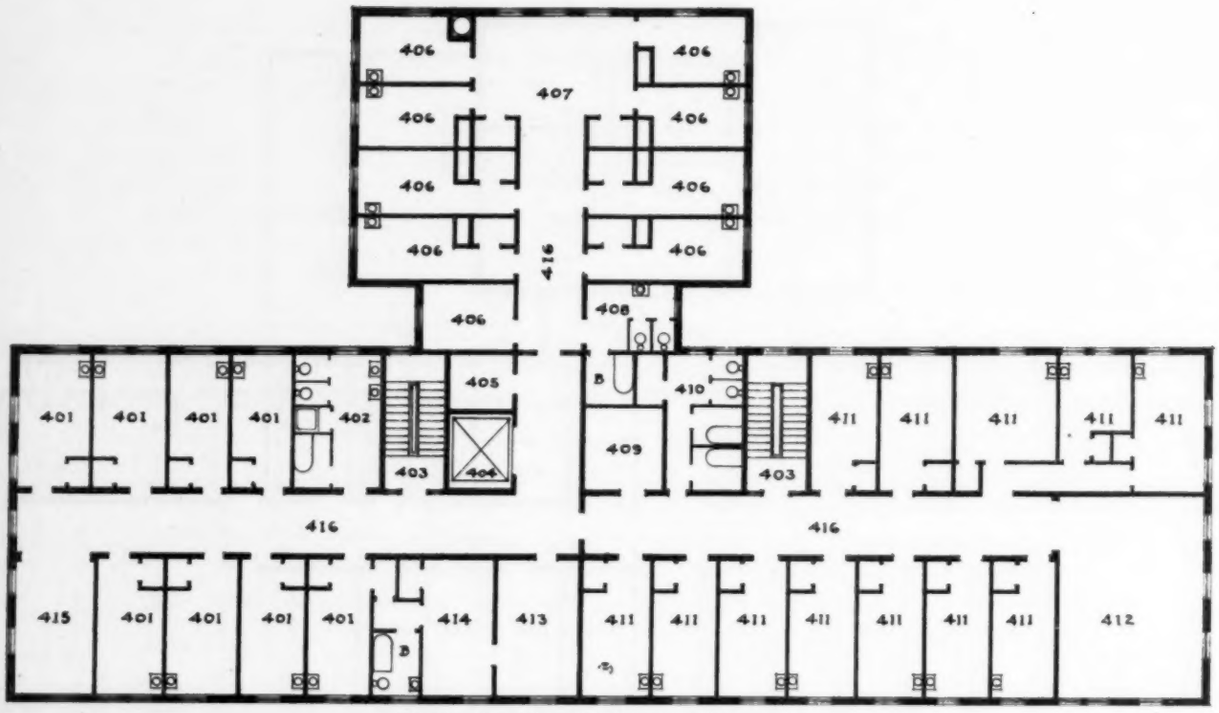


Fig. 10. Receiving Hospital. Fourth floor plan.

401. Interns' bed room.
402. Interns' toilet and bath.
403. Stair hall.
404. Elevator.
405. Store room.
406. Help's bed room.
407. Help's sitting room.
408. Help's toilet and bath room.
409. Linen room.
410. Nurses' toilet and bath.
411. Nurses' bed room.
412. Nurses' sitting room.
413. Doctors' sitting room.
414. Doctors' bed room.
415. Interns' sitting room.
416. Corridor.

tion room for urgent cases. A separate stairway leads from this section to the room for suspect cases in the basement.

The ambulatory patients' entrance admits to a large waiting room connected with the examination room. In the corridor adjoining is a small room for patients' clothing, with a chute to the basement. Visiting doctors are provided with a special room centrally located and communicating with all parts of the building.

The men's ward section on the first floor accommodates 21 patients, with serving rooms, dining and day rooms, bath and toilet rooms, and sink and linen rooms. The serving rooms have a dumbwaiter, sink, refrigerator, china closet, and tray racks, and a gas outlet for special diet cooking. The sink rooms are fitted with china sink, laundry tray, sterilizer, and incinerator. The clothes chute leading to the basement is located in this room, and is provided at each floor with a specially designed metal hopper door in an 18-inch diameter glazed tile chute. The women's ward section in the west wing of this floor has accommodations for 10 patients, with the various accessory rooms, similar to the men's section. The remainder of the first floor is assigned to the general administrative offices, vault, store rooms, etc. Eight-foot corridors connect all departments from which lead stairways and elevator service to the basement and all floors.

The second floor arrangement of wards and service is similar to the first floor, with the addition of six private rooms for men and women, and dining or day rooms for men and women. This floor has 22 beds for men and 16 for women. The entire north wing of this floor is occupied by the operating section. The main operating room is at the end of the corridor, the north side being lighted by a steel casement window the full width of the room, and the room wainscoted 6 feet high with white glaze tile. Connecting with the operating room and the corridor is the anesthetizing room, and similarly situated on the opposite side is the doctors' room, with surgical lavatories, toilet, and shower room. A minor operating room, nurses' room, supply room, and toilets connect with the main operating room through a small vestibule.

A sterilizing room on the opposite side has a modern water sterilizer of 50 gallons capacity, with instrument, dressing, and utensil sterilizers and a blanket warmer. A small room adjacent is provided for instruments. Opening into the corridor are two recovery rooms and an x-ray laboratory, with dark room.

The arrangement of the men's and women's wards and service are practically similar to the floors below. The hydrotherapeutic department and psychopathic wards are situated in the north wing of this floor. The sick wards have accommodations for 22 men and 10 women, and the psychopathic and disturbed wards for 13 men and 3

women. The latter comprises a main ward, two private rooms, and four disturbed rooms, fitted with soundproof partitions and double doors. Under the direct supervision of the nurses, this ward has a bath and toilet room and two continuous bath rooms. A serving room is also provided. Opening off the corridor and near the elevator is a complete hydro room for the hydrotherapeutic treatment of men patients in this department. This room is wainscoted in marble, with 7-foot marble partitions dividing it into three parts, the largest containing the shower and needle bath, shampoo and table, sitz bath, perineal douche, and attendants' control table. In the other parts are the pack table and sink, hot air cabinet, water closet, laboratory, etc. The women's hydriatic room off the west corridor is similarly equipped, and directly across the corridor are three rooms for disturbed patients and a continuous bath room with two tubs. All windows in the psychopathic department and hydro rooms are double-hung steel sash, with wire plate glass in small lights. All disturbed rooms and continuous baths are under direct supervision through small windows into the corridor. On all floors the nurses' stations are situated at the end of the corridor adjacent to the wards, and are equipped with desk, medicine cabinets, and sink, and the automatic "silent call" signal system and telephone.

The interior finish is designed to facilitate easy cleaning. The floors are of terrazzo throughout, finishing on walls, with a cove base on all walls. Interior door frames are of steel, finishing flush with the wall surface. The windows are finished with plastered jambs and sloping stools. All interior wall and ceiling angles are finished with a cove, the surface painted and finished with a flat varnish finish. The stairways are of steel construction, with terrazzo treads and risers, eliminating ledges and corners.

The building is ventilated by a plenum system, the supply and exhaust ducts being located in the partitions and connected with motor-driven fans in the attic. The fresh air intake is on the roof of the north wing, from which the air taken is washed and tempered before being supplied to the various rooms. The vitiated air is removed by ducts, with intakes at the floor, and discharged above the roof of the main building.

The lighting system is of the most approved hospital type, the ward lights being on two circuits for the regulation of the intensity. The plumbing fixtures are of the highest grade, especially designed for hospital use.

The entire fourth floor is assigned to quarters for the hospital staff—a suite of rooms for the resident physician and three general sections for nurses, interns, and help's quarters, each division having a large sitting room, baths and toilets, linen rooms, etc.

THE SMALL COMMUNITY HOSPITAL—ITS CREATION[1]

The Survey of the Town as to Its Needs—The Kind and Size of Hospital—Its Funds for Building and Maintenance, How to Be Raised—The Charter, the Organization, the Trustees and Their Election

By JOHN ALLAN HORNSBY, M. D.

FEWER than 12 percent of the sick people of this country are using the hospitals; all the others are being taken care of in their own homes. Considering the fact that bedside diagnosis and drug treatment are pretty nearly obsolete and that modern diagnosis of disease is a question of the various hospital laboratories, and that treatment has to do with diet, physical therapy, and good nursing, it naturally follows that 88 percent of the people in this country who become sick are not getting the right sort of care; consequently they are not getting well as promptly as they should, and more of them are dying than should die, and there is a far greater amount of suffering than there would be if everybody who was sick was getting proper and prompt attention.

A good many thoroughly informed men and women have a feeling that every hospital in the land should be architecturally as good as modern science can make it, and that the equipment should include all that medical science can call for in the diagnosis and treatment of disease; that hospitals which cannot have all these advantages should close their doors, and the work which they are attempting to do should be turned over to hospitals that *are* properly built and well equipped. Perhaps if this idea were carried out, we might get along faster toward a day when there will be adequate hospital accommodation for all the people; but in the meantime a great mass of humanity would have to remain at home and suffer and die for want of proper nursing and adequate treatment of disease, because, after all, the cold fact is that hospital equipment today is far less a matter of inanimate apparatus and instruments than it

[1]This is the first of a series of six papers on "The Small Community Hospital—Its Creation, Maintenance, Organization, and Administration." Next month the financing of the hospital in all of its various phases will be taken up.

is a matter of skill and capacity on the part of the hospital workers. In other words, a competent pathologist with a microscope and $10 worth of apparatus will do far better work than an indifferently trained man with the completest laboratory ever designed.

We cannot possibly agree with the idea that, because a community is poor and unable to afford the funds for the building and equipment of an ideal hospital, the people of that community should be deprived of even a hospital atmosphere. This for several reasons: in the first place, the care of the sick in the beds in the hospital is only a part of a hospital's obligation to the community. The training and teaching of doctors and nurses in their community is a very important part of its duty; its example in sanitation, in hygiene, in inculcating good habits of living, in the use of good foods—these are all important parts of the duty of a hospital toward its community; and, even if the hospital were not caring for and curing a single member of the community, the institution, by reason of its mere existence, would be more than worth while as a workshop in which the physicians of the community could acquire experience and improve their skill in their profession, so that they might be able the better to meet the emergencies of the community when such arose. It is beside the question that there is a good hospital twenty-five miles away; the transportation is bad and slow and uncertain; or, even if the transportation were good and prompt, the needs of the patient are urgent and he or she must have skilled operative attention immediately or die. How are the doctors in a community to acquire the necessary skill to take care of the health of the people unless they have access to a hospital? And it seems that if it cannot possibly be a good hospital, then even four walls, clean beds, and simple furniture, operating room, and ordinary kitchen and dining rooms, all pervaded by an atmosphere of skilled competence, is a very much better thing than no hospital at all. So it seems to us that every community of two or three thousand people is entitled to a hospital of some sort; a reconstructed private residence or even a made-over abandoned factory building would be better than no hospital at all.

THE SURVEY OF THE COMMUNITY

All over this country—indeed, all over the world—there are good-hearted, philanthropically inclined people, medical and lay, who are awakening to the fact that their community ought to have a hospital. THE MODERN HOSPITAL has been and is inundated with inquiries from such people as to how they may proceed—first, to develop whether they really need a hospital, and, if so, what kind, and how to go about it.

It seems to us the first question to be settled is whether the community actually does need a hospital, and we have almost answered that question above. If there are two or three thousand people whose interests can be focused at a single point—that is, in a small town, and if there is not a hospital near by that will furnish a workshop for the local physicians and at the same time provide a place in which the sick of that community can be taken care of promptly and efficiently, then that community needs a hospital of its own.

A very superficial inquiry among the medical men of the community would develop the fact as to whether there is enough sickness in the community that would naturally and under favorable circumstances find its way into a hospital. The doctors could go over their visiting list for a year back and pick out from memory the ordinary cases that came under their own care that would have gone to a hospital if such an institution were in existence. Suppose there were 200 of such cases in the course of the year among all the doctors. Are not those enough to satisfy the people of the community that they need a hospital? And let us take, for instance, that figure 200 as the number of sick during the past twelve months who were in need of hospital care and who were compelled to remain at home. It is generally conceded that the average stay of patients in an acute disease hospital is fifteen days. If there were 200 people all told, that would mean that, if there had been a hospital in that locality, there would have been 3,000 days' treatment, or approximately ten patients per day in the hospital. But the hospital habit grows on members of a community and on members of the medical profession, and after a hospital had been in existence for a very short time the community would find, and the medical profession would find, that patients could get so much better care in the hospital than they could at their own homes that this average of ten patients per day would very rapidly grow to twice the number; and then, too, there are many people in a community who go about with infirmities of one sort or another—bad eyes that need attention, bad tonsils and teeth, diseased skins, chronic rheumatism, or one of a thousand other complaints from which, for want of facilities, they continue to suffer without any attempt to get well—so that, if there were a hospital, those cases would increase the number of patients very considerably. So by easy stages, and following out some of these lines of thought, a community can quite correctly estimate its hospital needs not only for the present, but pretty well into the future.

Then there comes the question of what sort of a hospital does the community need; naturally it must be a general hospital because all kinds of sickness must be cared for. The time has gone by when any hospital, metropolitan or other, can afford to reject certain classes of patients and accept others. People who find their way into a hospital are sick and their illness is not within their control, and a diagnosis is frequently difficult, if not impossible, so that a patient taken in for one disease might easily develop something else in the course of a short time, or perhaps a mistake was made and he did not have that particular disease, but something entirely different. It is unthinkable that a hospital of any sort can accept a patient and then send him home if it transpires that he was not just the sort of case they thought he was. The time is well at hand when it is a hospital's duty to be ready to take care of any kind of a disease that comes along and any kind of a patient; so it would seem that a general hospital would best fit any community's needs. But each community has a special problem of its own; for instance, it may be a mining district and a good many cases will be male surgical patients, and, if it is a coal mining community, a good many of these patients are going to have their backs broken and are to be long, tiresome, and chronic cases. In such an event the male surgical service would overtop everything else. Another community is made up of milling people, who are constantly getting eye troubles; in that event there would be a very large out-patient department, mostly made up of eye cases, and a great many patients actually in the hospital would be ambulatory patients and not confined to their beds. That would make a difference in the character of the hospital, and the interior arrangements would be somewhat different.

Then, the character of the medical staff would have something to do with the different services. If there was to be an obstetrician on the staff who had a large practice and who was a progressive and capable man, full of energy and activity, and who was growing in popularity, then the hospital would, to serve its own best interests, have to care for his patients and give him efficient service and good facilities, so that adequate care could be taken of maternity women, and that service in the hospital would grow amazingly if such arrangements were satisfactory. And so with any other member of the medical staff, and any other service in the hospital.

THE SUPPORT OF THE HOSPITAL

It isn't every community that needs a hospital that can adequately support even the simplest kind of an institution. There are some communities so poor that the members cannot even afford a doctor when they are sick—even a doctor whom they do not intend to pay. But the average American community can afford to support a hospital, and the architecture and equipment and general scheme of operation of that hospital will be largely dependent on the ability of the people to pay for it. If it is a poor community, it will be a poor hospital—but better than none.

There are two forms in which money must be provided—one for the building and equipment of the institution and one for its permanent support. Let us think first of the building funds. In a small community that is trying to arrange for a single small hospital to meet the needs of all the people, there is only one scheme by which money can be raised, and that is to go out with a subscription list into the community and get men and women who have money to put down their names for a specific sum, which many times can be divided up into three or four payments, semi-annual or annual, and, if the names on the subscription lists are good, the local bank will advance the money on the deferred payments for a small rate of interest. If the names are not good enough for a bank to accept, then they are not good enough for the hospital itself to count on, and the list will have to be amended and strengthened before building operations can go on. This applies to the building operations and equipment fund, whether it is to be a new hospital or a made-over private residence, and whether the equipment is to be the simplest form or elaborate. A warning right here must be given that a community has no business to ask outside commercial people either to present the institution with a part of the bill for equipment or building material, or to wait for their money. That isn't business, and it is unfair and unbusinesslike from every conceivable standpoint. If the community, after careful analysis of its resources, thinks it cannot create some sort of a hospital with local funds, and it knows where outside funds can be procured specifically as donations toward a good cause, it has a right to go and get those funds; but the minute that a beginning is made to mix business and charity, financing and philanthropy, just that minute the whole enterprise heads toward disaster.

People can give a good deal more money if it is understood beforehand that they are not going to be asked to give it all at once, and, if the matter is put into such shape that individuals are not compelled to ask for the concession of payments in installments, and it is clearly understood that the installment plan has been definitely fixed as a business proposition, individuals will not hesitate

to participate in that sort of subscription, but that all ought to be clearly understood and specifically stated.

FUNDS FOR PERMANENT SUPPORT

Every hospital should be organized and planned with a view to its becoming a self-supporting, hence a self-respecting institution; not that every hospital will be or is asked to be self-supporting, but the scheme of organization should be predicated on self-support, and the funds for support should be arranged for in adequate amounts before the enterprise gets under way, because there is always danger of miscalculating and of planning to do more, and in some cases contracting to do more, than the funds eventually arranged for will permit. The best possible way to achieve this end—that is, the end of self-support—is to plan certain pay accommodations in the hospital, and the amounts to be charged against each bed and for each service should be fixed and the total amount should be at least 25 percent more than the actual necessities figure up, for the reason that there are bound to be unoccupied beds, slack seasons of work, and some unprofitable adventures. Twenty-five percent ought to give a fairly clear margin in which the hospital may move itself.

Every bed in every small community hospital should have a price and should be charged for; this thing of doing indiscriminate charity work, with no specific funds with which to do it, is wrong and must lead to disaster; not that it is wrong to do charity work—indeed, charity work must be done and will be done—but it should be paid for by funds expressly provided for that purpose. In other words, let us say that we have organized our hospital, planning its fixed charges and with determination to keep within these charges, and then let us say we have it so arranged that 75 percent of the capacity of the house will be adequate to earn the necessary amounts; that would be an excellent plan of organization, and would be the way that a banker or businessman would go at the affairs of his own enterprise. Why cannot he treat the hospital of which he is a trustee, and which he helps to control as a sacred trust, in at least as safe a manner as he would his own business affairs? A superintendent operating such a hospital, so clearly and classically provided for, would always know what to do and could plan ahead. Then, if a fund comes along, given for the purpose of doing charity work, no inroads are made on the income of the institution and no financial legerdemain will be called for to finance the institution. There will be no deficits at the end of the year, and, most important of all, under such circumstances the good people of the community will become impressed by such methods and they will give more liberally to the institution because they will be quite satisfied that their funds are being properly employed.

THE ORGANIZATION

We have now seen where our building fund, our equipment fund, and our fund for permanent support is to come from. Now let us see how it is to be expended and who is to conduct the affairs of the institution.

Long before we begin to talk about money needed, at the very birth of the thought toward the creation of the hospital, half a dozen or more of the safest, soundest business people of the community should be called together and the plan of him or her who conceived the scheme should be laid before this small group. If there are objections, this is the time to raise them. The whole scheme should be laid out and arranged in a general way. Then the number of organizers should be increased to perhaps fifteen or twenty, among whom there should be a number of the better women of the community, and the greatest care should be exercised in the selection of these women. The care of the sick is woman's business, and the affairs of the hospital are more acutely her concern than the men's, but women are not good financiers in hospital management and too many of them have the unhappy knack of wanting to go to the kitchen to shell peas for dinner, into the linen rooms to direct affairs there, and into every other crack and cranny of the hospital to dip into details, to the great discomfiture of the superintendent, who is paid to do that kind of work. So that in the early days of the hospital's career the greatest care should be taken to identify women with its active interests who are big enough and broad enough to know where their abilities can be properly exercised, and recognize the dividing line beyond which is the superintendent's exclusive prerogative and duty.

Having got these people together, the survey suggested at the beginning of this paper should be inaugurated and carried out. That would be best done by one accustomed to deal in figures and cold facts, and not one whose sympathies would be exposed to every changing current. In this survey all the possibilities should be developed—whether the community needed the hospital, what kind of an institution was needed, what size, where to be located, the raising of the funds, and the plan of organization. A written report should be made covering all of these phases of the survey, and at this point counsel should be had with an experienced hospital administrator, because at this point an infinitesimal mistake can set the

whole enterprise out on a road that will lead it far away from its proper goal.

This group of people can go ahead now on their subscription lists and appoint three committees: a building committee, whose duty it would be to begin the preparation of tentative plans for the building of the hospital, and that committee's work should be based on the survey report finally adopted, which should specifically state all details for that committee to work with, including the size and cost; a finance committee, whose duties it would be to direct and oversee the collection of funds and their proper expenditure; and an organization committee, whose duty it would be to create a completed organization, beginning with the board of trustees and ending with the downstairs help in the finally completed institution, fixing authorities and responsibilities and duties.

All these committees will be working independently of each other in a measure, but interdependent, also, in a measure; plans for the building, the finances, the scheme of organization, all can go forward happily together, and every so often general meetings of the group should be held and reports should be made to the whole meeting by the various committees, and these reports should be amended and adopted, and should serve as a permanent working basis; notes should be kept of the doings of these meetings by a capable secretary, and at each meeting the notes or minutes of the last meeting should be read and approved—all as a working record.

THE CHARTER

We have seen now the inauguration of the work without any authority whatsoever in law, undertaken and carried out by a group of self-appointed people, and this status must be retained until the funds, at least a sufficient amount to assure the success of the project, are provided. The next step is work for a lawyer—the preparation of the papers for incorporation of the hospital, the securing of a charter from the state and the license from the county, or city, or town. This charter is an important paper, and a fairly workable form of such a document follows:

The object of this corporation is: "To purchase, erect, own, and maintain hospitals and similar institutions for the care of the sick; to teach the science and practice of medicine and surgery, social hygiene, and the most modern methods of restoring and maintaining health and preventing disease; to purchase, erect, own, and maintain laboratories for the discovery of causes of disease and the treatment thereof, including all such research work as may be directed by its board of directors or governors; to compile, print, and publish books, pamphlets, and public lectures, including the results of such research work as may be undertaken; to receive, manage, invest, care for, and disburse any gifts, donations, or bequests made, appropriated, or set apart to said corporation to promote any or all of the above purposes or for any benevolent purpose designated by the donor or donors; and to do any and all things necessary or incidental to the carrying out and exercise of any or all of the objects aforesaid."

This charter will be asked for in the name of certain commissioners, and these commissioners must meet after the charter is granted and call for an election of trustees. Then comes up the question, who are to vote for these trustees, and the best way to provide for this is by way of the charter as above indicated—that is, an association must be formed, with annual dues, life memberships, and so on. This is a good way to raise money, because each individual who subscribes will have something to say about the institution's activities, and people who are sufficiently interested to give money for a hospital are sufficiently interested also to want to have something to say about its affairs. It can be provided that an annual fee of, say, $10 will entitle the holder to membership in the association, with one vote, and each $10 can call for an additional vote if so desired. This offer is some inducement to people to give large amounts, because, if they have only one vote, no matter how much or how little money they give, they are not likely to strain a point in the amount of their gifts.

THE ELECTION OF DIRECTORS

The charter commissioners will call a meeting of these association members or stockholders, and an election will be held for directors, and this election is a very important matter. Too many directors are unwieldy, and in any event only a very few will be actively engaged in the institution's affairs, and yet, if there are too few directors, it will be more than likely that a cry will be raised in the community before long that the hospital is a trust, in the hands of two or three people; so that some middle ground should be chosen in this matter. A directory made up of twelve or fifteen members is a good, workable one. But these directors should not be chosen to terminate their service all at the same time. If that were done, policies of the institution that had been long prearranged and that were in course of successful carrying out could be changed overnight and the institution thrown on the rocks by a new group of men who had not been sufficiently long in the enterprise to have a proper perspective and the proper attitude toward, and the necessary experience in, its affairs. It is best to elect directors for different terms—say, two go out each year; but this arrangement should be so made that it would take four or five years for a sufficient number of new men to come in to change the policies of the association. Before that time was up the men would have become thoroughly accustomed

to their duties, and thoroughly educated and trained, and, if the prevailing policies of the institution were good, they would have come around to their support before there were enough changes to make a difference. Another warning at this point; it is hazardous to elect doctors as members of the board of trustees. Medical men are an integral part of a hospital—its affairs are their business; they are living their very lives there, and consequently their interests will be greater than those of any other factor in the community. Doctors are only human, and, while they give more to a hospital than anybody else, at the same time the hospital gives more to them also. And if these men are on the directory, it is just a little bit more than fair to expect that they will not use their positions sometimes in their own selfish interests. And whenever a doctor uses the hospital for his own interest, he is unfair to some other doctor, and that other doctor is going to find it out presently, and the situation will breed criticism, discontent, jealousies, and an unhappy state of affairs. Nine-tenths of the friction in the hospitals of this country today is due to the dominating influence in the institution of some member of the medical staff. If all the doctors are treated alike, and if they are kept to a staff of their own, which is the medical staff, and are not permitted under the scheme of organization to have a vote in the directory, and are not permitted to be present at the meetings of the directory, the institution will prosper to a far greater extent.

Necessarily some phases of the creation of this small hospital will overlap, and perhaps a few items suggested in this paper may have to be repeated in subsequent papers, but some of them are so important that repetition should strengthen and not weaken them.

(To be continued next month.)

COMPULSORY STATE-WIDE HEALTH INSURANCE AND ITS RELATION TO THE MEDICAL SERVICE[1]

Carefully Prepared Data on the Advisability of Providing National Health Insurance—Reasons for Adopting Health Insurance and Standards for the Measure—Epitome of the Plan

By EMERY R. HAYHURST, A. M., M. D., Director Division of Industrial Hygiene Ohio State Board of Health; Assistant Professor of Industrial Hygiene Ohio State University, Columbus

IN presenting the following material, I wish to state that none of the ideas submitted are original with me, but that the material has been culled from various sources, principally the work of experts in the subjects of economics and insurance.

As a premise and common ground on which to begin, let us assume that we are all interested in the subject of social insurance, and especially in that phase called health insurance, as a measure of economy, as a humanitarian movement, and as believers in the general principles of insurance against hazards wheresoever they may exist.

Before taking up the various propositions which appear to confront us in connection with the final establishment of health insurance in this state, it is proper to submit just what the proposed insurance comprehends. To save time, I will cite the following paragraphs from their original sources (which any may read for themselves), and arranged under three headings, as below:

REASONS FOR ADOPTING HEALTH INSURANCE

"Health Insurance—Standards and Tentative Draft of an Act," submitted for criticism and discussion by the Committee on Social Insurance by the American Association for Labor Legislation, 131 East Twenty-third street, New York city, November, 1915. (Read pages 1-2.)

"Memorandum on Health Insurance Legislation." Four-page leaflet published by the American Association for Labor Legislation. (Read the first paragraph.)

"Insurance—Its Relation to the Public Health." Public Health Bulletin No. 76, March, 1916, United States Public Health Service, by B. S. Warren and Edgar Sydenstricker. (Read pages 43-45, 53, 66-67.)

"Social Insurance and the Medical Profession," by I. M. Rubinow, *Journal of the American Medical Association*, January 30, 1915, pages 381-386. As concerns its value in the matter of compensation for industrial diseases, Mr. Leonard W. Hatch, chief statistician of the New York State Industrial Commission, states that "in factories alone the death rate due to industrial diseases is unusually high. The amount of compensation paid to the dependents of workers in cases where death resulted from industrial diseases was 3.74 percent of the amount paid where death resulted from accident, while the amount paid to workers disabled by industrial diseases was only .13 percent of the amount paid to workers disabled by accidents (British experience). . . . There is reason to believe that, should the Legislature of New York state include industrial diseases under the compensation law, the total increase in the amount of compensation paid for injuries and deaths caused by industrial diseases would be about 1 percent of the total now paid for injuries and deaths caused by accidents." Hence we find that industrial diseases pure and simple are not apparently a very great factor in this demand for health insurance. How much diseases *partly*

[1]Read before the Ohio Hospital Association Convention, Cincinnati, May 24, 1916.

industrial may be important in the demand, it is wellnigh impossible to estimate. However, I look on compensation for industrial diseases themselves, and apart from compensation for all disability, as entirely impracticable because of the many disputes which arise as to the importance of contributory factors outside of the industry in the development of the diseased conditions.

STANDARDS FOR HEALTH INSURANCE

"Health Insurance Standards and Tentative Draft of an Act," pamphlet by the American Association for Labor Legislation. (See above.) (Read pages 3-4, 22.)

"Health Insurance—Its Relation to Public Health," Public Health Bulletin No. 76. (See above.) (Pages 52, 67.)

THE SCHEME OR PLAN

"Health Insurance," by *American Labor Legislation Review*, Vol. VI, No. 1, March, 1916. (See especially article by Henry R. Seager, pages 21-25.)

"The Gist of the Health Insurance Bill." Leaflet, American Association for Labor Legislation. (One page.)

"Memorandum on Health Insurance Legislation." Four-page leaflet. (See above.) (Pages 1-3.)

"Health Insurance—Its Relation to Public Health." Public Health Bulletin No. 76. (See above.) (Pages 54-57.)

"Health Insurance Standards and Tentative Draft of an Act," American Association for Labor Legislation. (See above.) (Page 26, sec. 52.)

Some features in the scheme or plan stand out. The expense of the same, as conceived in the Mills bill presented before the Legislature of New York state, comprehends 3 percent of the payroll. If the employer pays two-fifths of this, he suffers an increase of 1.2 percent of his payroll in order to meet his part of the premiums. If, as in the case of manufacturing a pair of shoes, the payroll represents one-fifth of the total cost, whereas materials, equipment, and overhead represent the other four-fifths, the employers will have to add to the cost of his product one-fifth of 1.2 percent, or .24 percent. In figures, this would amount to an addition of 1.2 cents to be added to the manufacturer's price on a $5 pair of shoes—i. e., the cost of the shoes thereafter would be $5.012. This is certainly an astonishingly small amount which the employer will have to add to the cost of products in order to raise his own part of the premiums for all the benefits to the workers comprehended; visibly, sickness bills for self and dependent members of his family, the cash benefit for not over twenty-six weeks amounting to two-thirds of the average wage, maternity benefit, and death benefit of $50. One enterprising laundry company in New York city has already undertaken to exact the cost of its contributions to the now existing workmen's compensation insurance by adding, for example, 2 cents to a laundry bill which totaled $1.93, making the total bill to the customer $1.95. Obviously, certain regulations of this practice must be adopted to prevent combination in industry from saddling on consumers fraudulent taxes alleged to be due to the cost of health and accident insurance premiums.

The benefits to 95 percent of the working people and their dependents, which practically means 95 percent of the total population in any community, are so obvious that the slight tax of 1.2 percent to secure all of these benefits cannot be complained of as a hardship by them. In instances where workers receive less than $9 per week, arrangement is made for a proportionately greater share of the contributions by the employer.

Contributions to the state fund by the taxpayers in general may be seriously objected to by the farming community, which is now exempted from workmen's compensation insurance. Every endeavor should be made to bring the economic features of the plan to the notice of the employing and hiring farmers, not only to include them in the insurance scheme, but to overcome their present general opposition to all increases in taxes which are necessary to meet clamoring needs.

The medical service is interested in at least forty propositions, as follows:

1. Compensation always creates a large additional demand for the services of the physician, surgeon, dentist, hospital, dispensary, pharmacist, nurse, and social worker.

2. As accidents or sickness now mean loss of wages, most wage-earners are forced to accept gratuitous treatment very soon and to crowd free hospitals and dispensaries, while family physicians and others witness uncollectible bills. Most medical charity, voluntary and involuntary, will be eliminated.

3. The actual amount of total remuneration (based on accident compensation and foreign experiences) will very materially improve.

4. Bills collectible from casualty companies will greatly decrease in number or disappear. Bills collectible from more or less willing and prosperous employers will also practically cease.

5. No service need expect to "make a good thing" out of the new conditions which will supervene. Each may expect to make an honest, sound living.

6. The community will come to place a higher valuation on services of healers and educators—perhaps somewhat in keeping with those placed on the services of prize fighters and baseball players. There will be a great awakening of the individual to his voting responsibility and his direct interest in public affairs.

7. There will be no more medical bills of large size for minor services, because standards of payment derived from service among prosperous families, with its accompanying waste in waiting for business, cannot be applied to the treatment of the great class of wage-earners.

8. The medical service will need to guard against the "physician on the fringe," who may have a tendency to aid in the development of malingering.

9. There will, no doubt, be a change in medical ethics in regard to the sense of professional duty toward the patient as related to the duty to the social organism as a whole.

10. The medical service will have to study against the danger of encouraging the excessively neurotic diathesis.

11. In addition to the surgical and medical judgment, a new economic judgment will be required, especially in regard to the time each case will consume before the entire restitution of earning capacity returns. In other words, a much deeper study will have to be made of prognosis.

12. The physician's judgment is too optimistic more frequently than otherwise.

13. The acceleration of economy will acquire a definite commercial value.

14. An indirect result will be the stimulus given to physicians and all the treating agencies in the work of prevention.

15. Rubinow estimates that, based on foreign principles, the national system of sickness insurance alone in this country would represent an annual amount of about $300,000,000. Of this amount, one-half will be spent for medical aid and treatment, the other half going to cash benefits.

16. The futility of drugging and treating a sick man when other conditions are unfavorable to his recovery will arm the physician or treating agency with a potent weapon in the demand for necessary improvements in home, workplace, and habit hazards.

17. All treating agencies will have the right of organized effort to improve conditions of employment, conditions of home life, and advancement of the knowledge of personal hygiene.

18. All treating agencies will have a guaranteed source of income as against the speculative character of private charity.

19. The physician's relation and those of treating agencies to lodge practice, and especially to the standards of remuneration, will be greatly changed. Physicians will note many inroads into the field of private practice which their organizations must regulate rather than oppose, since most of them will be to the general economic advantage of all parties concerned.

20. Insurance actuaries state that medical service is hopelessly behind the times. In its worst phase, private medical practice is, medically, from twenty-five to sixty years behind the present status of medical science and surgical skill. In its best phase, it is a luxury, which, like automobiles or private yachts, can be purchased only by the selected few. The socialization of medical service must come. The purpose it must accomplish is twofold—improvement in quality and cheapening in cost.

21. It is not likely that the right of selecting the medical service on the part of the sickened individual will obtain to a complete degree, as this is based on the theory that the patient is a better judge of a service's ability than are those who are in a proper position to know.

22. Shall the remuneration of the physician be in the form of a regular salary, as is done in some German cities and in the medical service of Russia, or shall compensation be in proportion to the number of visits made, as in Leipzig, or in proportion to the number of permanent clients whom a physician may succeed in attracting, as in England, or shall he be remunerated in inverse proportion to the amount of sickness, as the Chinese are supposed to do?

23. The financial relations of a large existing organization may be seen in the twentieth annual report of the German sick funds (year 1913), just issued. An abstracted table gives the following information (see United States Labor Review, Vol. II, No. 4, April, 1916, p. 98):

Medical care is provided from the first day of sickness. Financial aid is given beginning with the fourth day of sickness. Compensation continues for twenty-six weeks at the longest.

Notations	Total	Average per member per year
Number of funds of associations..	21,342	.....
Membership	13,566,473	.....
Average membership per fund....	635.67	.....
Cases of sickness.....	5,710,251	.....
Days of sickness.....	.....	8.66
Total contributions	$104,909,309.00	$7.73
Total disbursements	103,000,075.00	7.59
Total cost of sickness.....	92,983,399.00	6.85
Medical treatment	22,358,051.00	1.65
Medicines and other curatives....	14,355,602.00	1.06
Sick benefits	38,446,843.00	2.83
Maternity benefits	1,803,748.00	.13
Funeral benefits	1,911,602.00	.14
Hospital treatment	14,260,202.00	1.03
Care of convalescents.....	81,352.00	.007
Cost of administration.....	6,157,354.00	.45
Excess of assets over liabilities...	73,986,569.00	5.45

24. What arrangements will the physician make as to remuneration when he knows that his visits are altogether ineffectual except for the moral effect, for under the system a social conscience must be uppermost?

25. There is a possibility of developing a new national pride in the efficiency of medical services, which can be brought about, however, only with the physician as an enthusiastic ally.

26. The proposed bill, as it now stands, gives practically no details as to the relation of the physician to the insurance scheme. Section 9 simply states, "medical, nursing, and surgical attendance, and treatment, and all necessary medicine, shall be furnished from the first day of sickness, but not to exceed twenty-six weeks, etc." The only other section touching on the medical service is No. 37, "Health Insurance Union"—"two or more health insurance carriers within a district may combine for the administration of the medical benefit, subject to the commission." Regulations for dissolving such unions when they prove unfeasible are also laid down.

27. Should not a physician elected by the legalized medical fraternity of the state be one of the five commissioners appointed by the governor, with the advice and consent of the Senate?

28. An intensive organization of medical service will be called for, as only in this way can a man be given the service which he needs at a reasonable rate. Dr. Rubinow, the statistician, gives the following illustration: "I remember in Wisconsin the great objection to the requirement of examination before marriage was that the fee was limited to $3, and that a Wassermann test was required, while the physicians declared that such a test alone costs $10—couldn't be done for less. I happen to have a friend who is quite expert in making Wassermann tests, and he states that he is able to, and often does, make fifty to sixty tests in one day. But he is working for a medical institution, and I doubt if he receives $10 a day for all the examinations. The fact is that the actual cost of making a Wassermann test is not very much higher than making an ordinary test, but it costs $10 under the present disorganized conditions of the medical field. As a result, some insurance companies in New York are beginning to see the light and organize their own medical service, by which they are able to provide more medical aid than the law calls for. But the social and economic solution is some system by which all necessary medical care can be given to injured employees at a cost not greater than required at present for their limited aid."

29. The United States P. H. Service points out that, without an efficient medical staff closely related to the

federal or state health agencies, any system of health insurance will fail of its best results. It will not be a health measure, but merely a relief measure—a serious mistake, as shown by the experience of the European systems. There must be a better correlation between the health insurance system and the medical profession than has existed in the German and British systems. Otherwise, "doctors' strikes" will follow. Also, on account of the extent of malingering on the part of patients, there should be appointed medical referees to investigate and sign all certificates of doubtful character. Precedents have shown that this system has proved successful wherever tried. It is not necessary to point out the possibilities of disease prevention which may be expected from the visits into the home of their sick beneficiary of a skilled sanitarian in addition to the attention of the family physician.

30. The United States P. H. Service proposes the freedom of the choice of physicians on the part of the injured persons on a capitation basis, regardless of whether their patients are sick or well. Thus every incentive will be offered to physicians to keep their patients well, to render the most efficient service, and to prevent malingering.

31. It is also pointed out that the responsibility of signing disability certificates can be removed from the family physician and placed in the hands of a disinterested medical officer of the Government. Furthermore, the fact that the weekly cash benefits are materially less than the weekly wage is another factor which would tend to prevent malingering.

32. There will also be a decided inducement for physicians to locate in areas where the poverty of the people has previously made medical practice impossible except on a charity basis.

33. The claim that the medical profession has not been consulted enough is not true, since the committee which drafted the proposed bill has worked directly in connection with a special committee of the American Medical Association composed of Dr. Henry B. Favill, of Chicago; Dr. Lambert, of New York; and Dr. Cotton, Boston, which committee has been making reports for nearly a year, although recently disrupted because of the death of Dr. Favill. Especially has the committee been requesting opinions from physicians throughout the country, so that, as the bill appears in any state, the medical body thereof may be in a position to have inserted the proper sections or amendment to sections which are desired, including the minimum compensation of the physician, the maximum number of persons to be placed under the contract practitioner's care, the appointment of physicians under civil service examinations, and the limitation to physicians qualified to practice under the medical practice laws of the state. Dr. I. M. Rubinow, 131 East Twenty-third street, New York city, is now secretary of the committee.

34. There will be a general doing away with sanitary inspectors, who, at most, are "easers off" between the intermittent demands of society and the opposition of the temporarily embarrassed individual. Their places will be taken by the little weekly insurance premiums, which will rise or fall, according to the perfection of hygiene present. The skilled sanitarian and hygienist will appear in every community.

35. It is expected that each component society or local will develop its own standards, publish its own manuals of safety—perhaps even provide for its own educational advancements.

36. Regulation medical service will supplant quacks, practicing pharmacists, patent medicines, and home treatment.

37. There will be a great increase in the use of medicines and medical appliances.

38. The people will cease to dread hospitals, and there will be much less treating of the severely sick in homes.

39. There will be a great increase in private associations meant to supplement the efforts of the insurance authorities and the physicians.

40. The supervising commission having a medical representative should be empowered to supervise all funds and determine their character and limits of jurisdiction, promulgate all regulations necessary to enforce the act; maintain staffs of medical examiners, specialists, dentists, and visiting nurses; provide for medicines and appliances; make contracts with local physicians; cooperate with local funds and health authorities in disease prevention; and provide for collecting actuarial data.

GENERAL COMMENTS

The public is the best served when the incentive to exact diagnosis and careful treatment exists; when the personal relationship of the family physician to the patient is maintained; when contract practice, except on some salary basis entirely, is impossible; when contracts with the physician allow, at the most, a per capita payment for the total number of persons under his care, and this number is limited; when the physician cannot be the monitor between the patient and idleness; when the detection of malingering will be an incentive to all who have aught to do with the treatment; when the doctor's time is not usurped by an excessive number of patients; when the physician's income is not definitely fixed or his opportunity limited; when the incentive to personal achievement in medicine is present; and finally, when the medical art is not allowed to deteriorate and services become routine and second class, but when all is intensified and waste is eliminated through better medical organization.

SUMMARY OF CERTAIN FEATURES

This is insurance—not endowment. No large sums will be accumulated for spoilsmen to go through with. One-sixth of the total accumulations of the past three years will be the maximum sum which any local association may accumulate. The amounts levied therefor will be in close relation to the immediate demands for the care of sickness.

The local aspect of the administration of funds in each community by each locally interested society assures the success of the whole scheme. It is direct government of the assessed in the control of the funds spent. Readers should especially see the article by Wm. Hard, entitled, "Who Keeps the Watch on the Rhine?" in the March, 1916, issue of the *Metropolitan Magazine*.

A great intensiveness in medical organization is to be expected, whereby all the treatment which

is needed in a given case is supplied, and whereby all persons needing treatment will receive the same.

Because of the bona-fide character of the service to be rendered, great opposition is to be expected from all nostrum makers, quacks, and others selfishly interested in the exploitation of sickness. The elimination of selfishness guarantees the ultimate perfection of the benefits to be derived from state health insurance.

BOILER AND ENGINE ROOM ECONOMIES

Cost of Steam, Electric Power and Light, and Hot Water Is to Be Had With Present-Day Measuring Apparatus—Institutions Should Treat Power Plant Expenses Like Other Departments

By OTTO E. GOLDSCHMIDT, Consulting Engineer, New York

TO many of those who are in direct charge of our modern hospitals, and I refer particularly to those in authority who have to approve the bills for coal, water, electricity, oil, waste, and other supplies which go to the making of heat, light, and power, it is a great mystery as to what actually happens to all the materials for which so much good money is spent. Usually the chief engineer is asked to check these bills, but he is generally the court of last resort, and beyond him lies the darkness into which the eye of the average manager cannot see.

In former years, before the mechanical equipment was brought to its present state of perfection, many directors were content and happy if their supply of heat, light, and power was at hand whenever it was wanted, and did not consider its cost if only satisfactory service was the result. They did not consider whether they were getting the most and the best at a minimum cost of production.

The bookkeeping system today in many of our hospitals where large sums are spent for the mechanical plant in the way of coal, supplies, labor, etc., is very weak and poorly developed, and the different departments are not charged for their proportions of the actual service, nor is the cost of production for regular periods determined, as is the case with most of our large industrial institutions, where each department must pay for its service as though it were a separate organization, and the cost of production is under constant attention and care.

I find in many cases, when the mechanical plant in a new institution is started, that, no matter how well it may be planned or installed, and how economical it may be in operation, the bookkeeping end is left, on the one side, to the operating engineer, who may be well up in the knowledge of maintaining and operating his plant, but knows absolutely nothing about bookkeeping, and, on the other side, to the bookkeeper who knows all about the regular methods and systems of bookkeeping, but knows nothing as to the distribution of the various charges as applied to the mechanical and electrical plant.

These features are brought out only too frequently when it comes to a consideration of purchasing current from the central station companies in place of its generation on the premises. As a general proposition, it is impossible to determine from the records which are kept as to what it costs to generate a kilowatt hour of current, and it is necessary to make special tests to approximate these facts. Unfortunately, in many cases the central station manager, keen to get new business for his company, will misrepresent to the owner, whether intentionally or otherwise, the true state of affairs, and will be enabled to shut down an isolated plant which is really making money for the owner. Again there are cases where an isolated plant in a small hospital could be shut down at a profit if the real costs were known to those in charge.

In many cases supplies for the mechanical plant are not divided into the general classes of maintenance, extensions, and production. Frequently have I seen all labor and supplies which went to the engine room, whether used on the elevators, other motors, or on the electric generators, all charged to the cost of producing current. Usually, in going into a plant where current has been made for years, on requesting information as to the cost of generating current, one is referred to the chief engineer. On inquiry from him you are given a rather indefinite reply or a certain fixed figure, but on further inquiry, however, it is seldom that you find that his figures are based on actual records kept for any period of time. In such plants it is at once apparent that the owners or managers have absolutely no conception of what is going on in their plant—whether good or bad.

With the present development of meters of all kinds, such as watt meters, steam meters, water meters, recording meters for hot water, and the

standard scales for weighing coal, which have long been with us, there is no reason why in a plant of reasonable size complete records of the cost of producing power, light, and heat cannot be accurately kept and proper distribution made of these items. Frequent tests as to the quality of the coal and oil should be made, and supplies carefully checked as to quality and quantity.

Daily records on printed forms of coal, ash, water, and electric current, oil, waste, and supplies should be kept, and proper distribution made between the various departments or uses. The labor account should also be properly distributed between maintenance, production, and extensions. The daily records may be summarized in weekly or monthly reports. These can be graphically shown in curves, and the relative consumption and production can then be analyzed and compared with previous periods. In this manner the responsibility for varying costs of production can readily be taken up with those at fault, and the managers or directors, even with limited technical knowledge, can maintain proper control over a department which has been drifting for years.

MEDICAL PROGRESS IN THE NAVY

Surgeon-General Braisted Lauds Secretary Daniels for Wisdom in Medical Matters

In his address before the graduating class of the Naval Medical School on April 12, 1916, the surgeon-general of the navy, Rear Admiral William C. Braisted, reviewed the work of the present administration of the Navy Department in so far as it affected the medical corps of the navy. The surgeon-general said:

"During the past two years the present secretary of the navy, in many instances on his own suggestion and in others by his support of the Bureau of Medicine and Surgery, has advanced our service in the following items:

"1. He has recommended to Congress the increase of the medical corps from 347 to nearly 500, the first increase in twenty years and most urgently needed.

"2. He has provided in his personnel bill a substantial increase in the upper grades of the medical corps. No increase in these grades has been made since 1870, notwithstanding the tremendous growth of the service as a whole.

"3. He has established two of the finest hospital corps training schools in the world for the training of male nurses, and made provision for the increase in this corps by nearly 11,000 men, an increase urgently demanded by the increase of the navy, and has also provided a possible chance for members of this corps to reach commissioned rank, thereby raising the efficiency and esprit of nearly 2,000 enlisted men in the hospital corps of the navy.

"4. He has made provision for a new hospital ship for the navy, which will enable us to build the first ship of this kind, designed especially for this purpose, and which will be a model for our country and the world. This one effort will, if granted by Congress, be of inestimable value to the navy and to all other countries. It will provide our fleet and our service with a floating hospital for the care of the sick and injured of the navy that will rival any metropolitan hospital in existence.

"5. He has established schools for the training of the native women of Samoa and Guam in nursing that already are giving most excellent results and are a most important humanitarian educational effort for these helpless people, promising, when completed, to be one of the noblest efforts made for the uplifting of any similar class of people.

"6. He has increased our appropriations to meet our necessities and to enable us to carry on our great work that extends not alone to the navy proper, but to thousands of human beings attached to the service in various ways and extending to all parts of the world.

"7. He has permitted us to take an active part in the regeneration of Haiti by furnishing medical officers and nurses to care for the sanitary needs of the great work that is now in progress in Haiti and which ranks with one of our greatest humanitarian efforts.

"8. He has supplied already, and gradually will furnish, our deficiencies in the many large hospital and medical organizations on shore, such as contagious units at Mare Island, Puget Sound, New York, and Newport, and has furnished adequate and commodious homes for our nurses at Mare Island and Boston, thus adding to the content and efficiency of the women nurses. South of Norfolk and San Francisco our coast line is practically unprovided with hospitals for peace and war, but, with a policy defining permanent naval stations, his attention has already been turned to the needs of the medical department. That we may not be unprovided in this respect in emergency, he has authorized our efforts with the Red Cross, and we are now beginning the organization of five Red Cross hospital units (mobile hospitals of 250 beds each, with personnel and equipment complete) that can be called at notice to any point of this coast line where needed.

"9. He has authorized a medical reserve corps, of the best medical talent that our country can furnish, to be ready to come to our assistance in time of need, and, to prepare this group of the naval medical corps, is initiating a correspondence school that shall give these officers a training and working knowledge of their work when called on. Realizing the great lesson to be learned from the present European war, he has detailed a number of our best officers for duty in Europe as observers, and the excellent results already show in the report of Surgeon Fauntleroy, whose work has added greatly to the professional knowledge of all who are interested in medico-military matters and is a credit to our service.

"10. The above are only a few examples showing the interest and activity of our secretary in this branch of the service. Did time permit, I should like to continue in detail to show you his interest and help as shown in innumerable questions of sanitation and organization, which makes the work of the medical department of the navy one of the most important branches of the service. Our work is most highly specialized, dealing as it does with so many questions, not alone with the healing of diseases, but with all that pertains to the orderly and successful running of this great department of the Government. The work of the Bureau of Medicine and Surgery touches intimately that of every other bureau in the department and makes us one of the busiest and most active corps.

"I have frequently asked myself, how is it that the head of the navy is so sanely interested in our work, and seems to comprehend our needs often before they are presented to him, and I think the solution lies in the fact of his education along medical lines. This comes, I feel sure, from the association with medical men of great worth and ability. Where has he had this association which has taught him the importance of medical work in the welfare of the nation? From all I can learn, it has come from the intimate friendship and association of his family medical advisers."

The Public Health Committee of the New York Academy of Medicine has again taken up the matter of the construction of a contagious disease hospital in the Bronx. In 1911 and 1912 the Public Health Committee presented the need of such a hospital to the Board of Estimate and Apportionment, but, due to the protests made by certain real estate interests, the original site was abandoned. In 1914 $125,000 of corporate stock was issued for the construction of the hospital. This was, however, not sufficient money to accommodate the needs, and it was decided to defer construction until more money could be secured. The committee voted to urge on the Board of Estimate the issue of additional corporate stock to make possible the construction of a hospital of at least 300 beds, which is in accordance with the results of the investigation made on the basis of the incidence of scarlet fever, diphtheria, and measles, and the estimated number of cases needing hospital isolation.

The MODERN HOSPITAL

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The War's Lessons

With this number of THE MODERN HOSPITAL we finish the stories of medicine and surgery in the hospitals of the European war in the form of an epitome of Surgeon Fauntleroy's report to the Navy Department. In all three of these stories we have had lessons in simplification, in discipline, in order, in thoroughness, and in "end results."

There is no doubt whatever that Dr. Fauntleroy's report is being studied carefully and conscientiously by the medical profession in this country, and that its lessons are being taken to heart. What about the hospital people—what are we doing as our part of the harvest of these great war lessons? Have they meant anything to us—are Surgeon General Braisted's enterprise and energy and thoughtfulness in sending Dr. Fauntleroy to the battlefields to secure this immense fund of information to go for naught, or are they to bear fruit in the added efficiency, better character, more convenient service in our institutions?

For some years we have been thinking and talking about hospital efficiency. The time has now come when we are to be put to practical test as to whether we really are in favor of efficiency and whether we are to participate in the creation of higher efficiency.

Until recently hospital administrators were not very well trained—they just grew, like Topsy; but that is no longer true, and we may just as well make up our minds now that those of us who are not willing to march in the parade of progress must get out of the hospital field as unfit, because the positions are going to be given to those who are fit, and we had all of us better stop whining and stop our complaints about our petty troubles and look upward and forward, and begin to do something to show that we are really efficient, trained hospital people, worthy of the confidence of hospital boards. As a first step, let us interpret Dr. Fauntleroy's report into action in our own institutions.

The Hospital Trustee

The hospital trustee is coming up this year in the discussions in more than one association meeting, and he is going to be belabored pretty thoroughly, and, unless the signs of the times are misleading, he is going to be a different man and she a different woman before he or she is to have any more peace.

About the only factor in hospital service that has not changed for the better in the past five years is the trustee—he is practically the same as he was. Some of him are indifferent and ignorant of their institution's activities, as they have always been; some of him are dominating and domineering, energetic without intelligence or special knowledge of the business they are supposed to be conducting; some of him—more especially some of her—have taken on a new physiognomy, with a long, sharp-pointed nose as the chief feature, due to the aggravated practice of invading the places that do not concern them in the hospital; some of him, again, are using the hospital for their financial interests—plainly, they are grafting, grafting in the sale of commodities to the hospital by institutions in which they are personally and financially interested; even some of them take commissions on goods which they permit to be purchased for the hospital.

Fortunately, the various above types of hospital trustee are in the great minority, and the future must eliminate them altogether. The vast majority of hospital trustees have a right conscience about their duties of trusteeship, they mean the very best good to the institution, and it is only training that they lack, and it is the duty of hospital administrators to insist on their trustees knowing what they are talking about when they attempt to argue on a hospital topic. In other words, if a hospital trustee objects to the superintendent buying a certain brand of food, or a certain quality of coal, or a certain fabric of blanket, it is the business of the hospital superintendent to be so intimately informed about the virtues of

these various commodities that he or she can "smoke out" the trustee and compel him either to defend his attitude or keep his hands off. It must be remembered that hospital trustees do not own the institutions; they are only trustees for others and are answerable to the community for their actions. They are public officials in a sense, and their acts are proper topics for public discussion, public approval or public opprobrium.

Let us have more light on the hospital trustee; let us enshrine the wise, beneficent, well-informed, just, efficient hospital trustee, and let us dethrone the other kind and get them out of our institutions.

The Movies as a Health Problem

Every day we see or hear some reference to the educational value of motion pictures, and great numbers of writers, artists, philanthropists, and reformers are concerning themselves with one phase or another of that problem.

We hear learned discussions pro and con of the relative value of this or that kind of picture, and the censors almost tear each other's hair over the question of the suppression of a "scene" of one kind or another.

Perhaps it might easily be said that a discussion of the ethics and the sociology of the motion picture is foreign to the purposes and functions of a hospital journal, or a publication devoted to the public health, but suppose there was a real vital health problem coupled with a most important social question—it seems to us that in such an event THE MODERN HOSPITAL, being deeply concerned about whatever has to do with the health of the people—moral, mental, or physical—would be entirely justified in approaching the problem from its own viewpoint.

And we do see a health problem in the present "movie" craze. We see our children and our young people, and also our elders, running to the movies night after night; we see them less content to spend the evening at home; we see them less frequently reading one of the classics, or even the better current works of fiction, to say nothing of serious literature.

We are seeing less of settled home life and its interests, less of that introspection and meditation so necessary if we are to approach each day's tasks with proper forecast and prearrangement.

We are seeing our young people more and more dependent on extraneous influences and outside excitement for entertainment, less self-contained, and less capable of the enjoyment of life for what is stored within themselves.

We believe that the "movie" craze is doing more to destroy the home life of the American people than all other influences combined; and we believe that it is as harmful an influence, and in the same way, as cocaine or morphine or whisky.

We believe the educational value of the movie is infinitesimal in comparison with its power for harm.

JOHN A. HORNSBY.

Live Hospital Topics of Today

We are publishing this month in THE MODERN HOSPITAL programs of three hospital associations —that of the American Hospital Association, which meets in Philadelphia September 26-29; that of the Catholic Hospital Association, which meets in Milwaukee June 7-9; and that of the Kansas Hospital Association, which met in Topeka May 2. Last month we published the program of the Ohio Hospital Association, which met in Cincinnati May 24-26. These programs are worth studying as an evidence that hospital thought is rapidly crystallizing into some definite standards and some well-mapped-out programs.

As the older and larger association, we would naturally think about the American Hospital Association and its program first. Dr. Smith has touched the quick, in the creation of his program, at several points and has given us some mighty good working topics to discuss.

1. The nursing problem we have always with us, and it is no fault of Dr. Smith's that it is again up for discussion at the very first session after the organization in the Philadelphia meeting. But nothing will be done about it—indeed, it seems almost unnecessary that anything should be done about it; as predicted in THE MODERN HOSPITAL some two years ago, while we have been arguing academically about nursing problems, these problems have been settling themselves along ways of least resistance, and they are now, fortunately, no longer in the debatable realm.

2. What could be more insistent today than outpatient and dispensary work, especially just now when we are realizing almost for the first time that the care of patients inside the hospital is only one, if not indeed a very small, part of the duty of the modern hospital, and that the welfare of the community outside the walls of the institution is the big obligation that must be met.

3. Hospital construction was never more unstable than just now. It is true that we still think in terms of fireproofing, of durability and architectural form, but we are realizing that there are still more important things to think about concerning the architecture of the modern hospital—viz., economical arrangement inside, so that better work can be done at less expense than in the past.

4. Then, at the afternoon session of Wednesday the topic of disinfection and the prevention of the spread of infections in hospitals is on the tapis. We are now almost unanimously agreed that so-called fumigation is not a solution of this problem, but that cleanliness, soap and hot water, backed up by conscience, are needed if we are to prevent the spread of infections.

5. The paper by Dr. Drew, on Thursday morning, on "Team Work and Stumbling Blocks," ought to bring out some new points, and certainly new points are needed, because "team work" is not only the most vital factor in present-day hospital efficiency, but it is in a kaleidoscopic stage, especially medical staff team work, and, after all, hospital administrators are vitally concerned about the solution of medical staff problems.

6. It is understood that in the Round Table session for large hospitals on Thursday evening one of the topics up for discussion is "The Hospital Trustee and His Relations to Other Factors in the Institution." We have some excellent trustees, and we have some even more excellent standards by which trustees may be measured, but there is also very much to be desired in the general status of trusteeship. Let us hope that in this round table discussion there will be many trustees present and that the topic will be handled without gloves—because it needs to be.

The keynote of the meeting of the Catholic Hospital Association is to be *Team Work*, and every form of team work, and every factor which enters into team work, is to be given a hearing. Dr. Charles H. Mayo is to lead off with "The Nature, Necessity, and Value of Team Work," and then others are to take up the physician's part, the trustee's part, the intern's part, the nurse's part, the patient's part, and the public's part of team work. Team work is more necessary in a hospital than any other one thing if success is to be achieved, and, if we could just encompass team work between all the factors named above, what a Utopia we should have in the present-day hospital! Let us come as near to it as we possibly can, and, in order to do so, the discussion at Milwaukee ought to be most illuminating.

Kansas has always been and notoriously is a trouble-maker. It used to be grasshoppers and bloody bridles, and chronic hemorrhage in "Bleeding Kansas." Now Kansas has more automobiles per capita than any other state in the union; she has more savings money in her banks per capita; she has more temperance, but otherwise she is not so dry as she used to be in the old drought days. Her state hospital association is starting trouble in another direction—viz., in the purchase of supplies. There is just a hint of this in Dr. Axtell's account of the Topeka meeting, where he speaks of the purchasing committee and the getting of bids on certain hospital supplies; this means, of course, that the association has gone into the community buying business. If carried along the right direction, community buying is one of the best things imaginable for hospitals, because the organization can specify some standards and guarantee that those standards are met, and the last word will not be said when the lowest price is indicated, but quality will stand for much if this purchasing bureau does its business properly, with price as an after-consideration.

This is to be a great year for hospitals. There are perhaps more than a thousand institutions now building; more money is being expended in hospitals than ever before, and without question we are launching on a new era of hospitalization, and we are definitely starting out on a journey the end of which will be that every sick man, woman, and child will have an opportunity to get the care of an efficiently conducted hospital.

GETTING DOWN TO DEFINITE ACCOMPLISHMENT

New York Social Hygiene Association Laying Out Year's Work, Including Hospital Activities

The Society of Sanitary and Moral Prophylaxis has been for some time limiting its work more and more to the local field, and the past year has been largely given to a study of the opportunities for social hygiene work in New York city, leaving the national field to the American Social Hygiene Association.

At the annual meeting on April 13 there was outlined a greatly extended plan of work to be undertaken immediately. The work will be carried on under two departments, interdependent—one for the study and suppression of venereal disease, under the direction of Mr. Frank J. Osborne, who for the past two years has been health officer in Orange, N. J., and one for the development of sex education, which shall tend toward a better understanding of the normal sex life, under the direction of Mrs. Frederick H. Whitin, who has been executive secretary of this society for some years.

Special effort will be made to improve the present hospital and dispensary facilities for the treatment of the venereally diseased. A recent survey made by the society showed that not only were the number of clinics and dispensaries in New York city inadequate, but that out of the twenty-eight in Manhattan alone, only seven came up to standard requirements.

The society also hopes to educate hospitals and dispensaries in the special value of follow-up work in venereal cases through social service workers, that a continued attendance may be assured and that the patient shall be induced to bring for examination other members of the family who may be infected.

The name of the society will be changed to the New York Social Hygiene Association. Offices are at 105 West Fortieth street, next to those of the American Social Hygiene Association, Inc., of which association it is a member. The national association does not interest itself directly in local affairs.

VAST WELFARE ACTIVITIES UNDER WAY[1]

Welfare Department of The National Civic Federation Reports Amazing Progress for the Past Year

A record of advancement and achievement under extraordinary conditions marks the year's work in the Welfare Department. It has been a year of contradictions. Precedents have proved of little value throughout the period, and yet there have been evident signs of remarkable progressiveness among our business leaders along the lines which this department follows. We entered on the year's work in the midst of business depression extending back before the outbreak of the European war and painfully accentuated immediately after war began. It might have been expected that the demands on our organization would have fallen off at such a time, but, on the contrary, they increased greatly in emphasis and volume. It was brought home to us that in slack times, when absorbing activities are relaxed, far-seeing employers turn their attention to plans for improvement which they may long have had in mind, but which under the pressure of prosperous seasons they could not undertake, thus utilizing unwelcome leisure in the achievement of ideals.

At the close of the period of depression there came another period of amazing prosperity as a consequence of the war, and from this industrial activity our work received a further stimulus. We saw new factories springing up, and seized the opportunity to issue an appeal to those responsible for their construction, directing their attention to the importance of devising and installing facilities for the health and convenience of their employees when organizing and equipping new plants. We invited them to inspect our permanent welfare exhibit, which occupies the entire thirty-fifth floor of the Metropolitan Tower, and in which we offer a graphic demonstration of typical practical plans for the physical, social, and mental benefit of wage earners, employed in small establishments as well as large.

Let me specify a single instance in which we have been able to serve in a very broad and practical way a great industry stimulated to enlarged activities by the war—the Remington Arms-Union Metallic Cartridge Company, with 30,000 new employees, has been in consultation with us for several months through its architect, Mr. Philip Hiss, and its industrial secretary, Mr. J. A. Page.

Thirteen thousand of these employees are women. Ten thousand have been absorbed by the town in which the plant is located, but for others the company is now building ten dormitories, each to accommodate 111 girls and each to have a high-class matron, with other attendants, where the young women will have an opportunity to entertain their friends as freely as if they were in their own homes. Special provision will be made for attractive dining halls, outside, which can be utilized at night for entertaining and dancing. Every convenience for physical comfort is being installed both in the dormitories and eating places.

Homes are being constructed in great numbers—enough to accommodate 6,000 new families. The rents are to be small, considering that light, heat, and other accommodations will be supplied. These homes may be bought by employees of the company according to their means, a plan having been adopted which my own company at Beverly has found effective. An employee earning less than a certain salary is not allowed to buy a house above a certain price. For example, a man receiving $25 a week may not take on an obligation above $2,500, while one having $35 a week is limited to a $3,700 house because he could not "swing it" at a higher price. There will be recreation and social halls and every modern device for community life. The most advanced sanitary arrangements are found in the vast ammunition and rifle plants for both the men and women, and there will be rest rooms and hospitals. There is a large lunch place for the men at the plant, and others are in contemplation.

As one result of the war also, we have had requests for help from European countries which are engaged in it. We have been asked for advice about the occupational training of women who have gone into the munition plants abroad to take the place of men called to the front, and we have welcomed the opportunity to give the benefit of our experience with regard to rest rooms, lunches, and other comforts.

Our permanent exhibit in the Metropolitan Tower has proved its value in countless ways, the activities in this connection being conducted by a very live committee, of which Mr. Leslie Graff is chairman. This exhibit is a mecca for employers seeking information. It provides standards applicable to many industries. It contains a great variety of photographs, illuminated stereopticon views, moving pictures taken on special occasions, and literature covering foreign and domestic experiences.

Lectures have been given there frequently by scientists, employers, and managers of industrial welfare departments. These lectures, well attended, have included accounts of the activities of employers in different lines of production, the methods employed in conducting welfare work, and the means of solving problems of installation. (In typewritten form they are now at the disposal of men and women who, recently entering the field as welfare workers, are learning how to administer their duties successfully.) They have covered many subjects, such as "Physical Examination of Employees," by the physician in charge of a large manufacturing plant in Massachusetts; a general survey of the welfare work for the great force of an electric company in New York state; accounts of the ambitious scale of welfare work in the clothing trades both in Chicago and New York, with emphasis on the value of personal contact; the work in connection with transportation lines; and vocational training for retail store efficiency.

An afternoon was devoted wholly to a meeting of 300 librarians, at which was given, with stereopticon illustrations, a full account of welfare work in various industries. One of our lectures, given by a specialist, on "The Relation of Dentistry to Health, or Stomatopathy," has been helpful in calling to the attention of employers the advisability of including this subject in welfare programs. The subject of employers' dental clinics was treated by Dr. Louis C. LeRoy.

Shortly afterward the Metropolitan Life Insurance Company established such a clinic for its employees, and during the first six months 2,385 employees were given prophylactic treatment. Five chairs are provided, with five operators and five women assistants, and the equipment includes locker rooms, a sterilizing room, and a room with complete outfit for the treatment of emergency cases. Arrangements have been made to give each employee who cares to take advantage of the offer two prophylactic treatments each year. This is the first undertaking of the kind on anything like so important a scale.

The Frankford Arsenal asked us for information as to whether, as had been reported, water issuing from a bubbling fountain caused injury on striking the teeth. An investigation by Dr. Leroy lead to the conclusion that

[1]This is an abstract of the report of Mr. L. A. Coolidge, chairman of the Welfare Department of the Federation, made to the annual meeting, January 17-18.

there is no real danger of this character from the bubbling fountain, a matter of serious consequence in view of the general adoption of these sanitary devices in industrial plants and public places.

The work of disseminating information through our exhibit and through our lectures has been supplemented by much individual effort. Beginners in welfare work have



Fig. 1. Permanent welfare exhibit of the Welfare Department of The National Civic Federation.

been brought in touch with persons having long experience in its administration. I remember especially an interesting luncheon in our welfare exhibit hall, when one expert of wide experience in sanitation and medical welfare work explained camp and plant sanitation to a man who had given up the profession of metallurgical engineering to take charge of the welfare work of a large mining company in South America. The same officer on another occasion was told by another expert of the latest improvements in housing and recreation. (Stenographic reports of these conferences might well be reproduced in this report, could it be done without excluding other matters which must be brought to your attention.)

Such conferences clearly demonstrate that, in origin and development, welfare work is only an active and intelligent recognition that industry does not and cannot operate in a vacuum. It is a human activity. It must draw the breath of life from the surrounding atmosphere, and it must do its share to keep this social atmosphere clean, wholesome, and buoyant. In this spirit the sanitation expert of one of our largest corporations said in the course of a conference: "We are going on the principle that this welfare work is not a separate part of the business. It is a part of mining and manufacturing; it is a part of making steel. It is not only a paying proposition; it is something to which the employees are entitled." On another occasion, in our conference rooms, a welfare expert made this statement: "To show the effects of our welfare work and all the activities included therein, we keep an account of the number of days worked per man per month; two things are shown—first, the increased interest of the man in his work and in his responsibility, and, second, the increased physical ability to work." Another trenchant utterance, revealing the same doctrine, was made in a similar conference by a representative of a large company, who said: "The welfare work we do centers about the principle that efficiency depends on health. That is the justification to stockholders for the money that we expend in welfare work." Without this social and civic atmosphere, companies operating in remote districts are confronted with the menace of unstable and drifting labor supply.

These conferences which we arrange between the representatives of various companies are vitalizing. They bring together men who have a record of achievement in providing or maintaining wholesome conditions of life and work as indispensable elements of business success and representatives of companies searching for information as to how to handle similar large undertakings.

A new undertaking of the Welfare Department this year has been the definite attempt to interest boards of trade and chambers of commerce in inaugurating industrial welfare departments similar to the trade welfare committees established by the American Iron and Steel Institute and the American Institute of Mining Engineers, both of New York, and the Wholesale Clothiers' Association of Chicago.

These employers' industrial welfare committees are encouraged to collect and publish information concerning model welfare institutions of leaders in their respective industries; to meet periodically for conference concerning conditions of employment; to determine on certain standards for improvements applicable in principle generally, and to cooperate with state and municipal boards of health in promoting industrial hygiene.

We can speak with pride of the achievements of Mr. W. L. Saunders, chairman of our New York Welfare Committee, who, when elected president of the American Institute of Mining Engineers, immediately secured the appointment by the institute of a special committee on welfare work. This body will especially advocate the principle that in engineering problems the human factor in the operating departments should be regarded as of equal importance with all others.

Our latest achievement of this character is the Industrial Welfare Department of the Detroit Board of Commerce, before which body your chairman appeared by invitation last April. A definite recommendation given on that occasion for the organization of such a department



Fig. 2. Lecture room of the Welfare Department of The National Civic Federation.

was promptly adopted. The president, Mr. Charles B. Warren, at once assured us that the step would be taken. An expert was employed and a fine welfare exhibit, on lines similar to that at our national headquarters, was established. An active campaign is now being conducted in Detroit. Already committees have reported on ventilation and lighting. The live character of the work is indicated by the recent announcement of a meeting to be ad-

dressed by leading welfare workers on industrial welfare nursing and industrial safety.

The Detroit Board of Commerce was asked to help extend the practice of welfare work by collecting for the benefit of local employers information as to the best examples of welfare work in that community. These they were in turn requested to furnish to us for the information of employers for whom we seek to interpret such humanitarian efforts. The board was also advised to organize local welfare committees, by trades or jointly, to study operations in industry which cause disease, to suggest means of preventing industrial disputes, and to hold conferences of employers to bring out useful welfare features for the benefit of all. It was especially urged to advocate administrative welfare boards composed of officials and heads of departments in each industrial force, and to coordinate all activities for the benefit of the employees.

We have helped also to develop corporation welfare departments. In advising one great mining company as to how to find a point of contact with its workmen, we suggested the distribution of bulletins in several languages, giving information to which employees are entitled, and we laid stress on the formation of a welfare board which would represent systematic efforts to keep the company in constant touch with the mass of the wage-earners. Our experiences with the discouragements which come to companies and to welfare workers where no orderly system is in practice indicates that of first importance is the organization of such a board. Its object is to secure, first, the cooperation of heads of departments, superintendents and foremen; and, second, the confidence as well as the cooperation of the employees.

We have been gratified by the acceptance of the various recommendations made by our expert consultants. No theories are advanced which will not operate in practice. Of that fact we believe ourselves capable of convincing inquiring employers. Nor is the federation's Welfare Department content with maintaining exhibits, giving lectures, and bringing about conferences between the expert and the experimenter. We keep in close touch with the actual operation of company schools, hospitals, clubs, and recreation facilities, with the health and safety devices, and the housing and sanitation plans throughout the country. We are equipped to furnish and do furnish itineraries for men and women in charge of welfare work seeking firsthand and concrete illustrations to help in the solution of special problems, thus insuring them the largest possible return on the time and money invested in educational journeys.

How we shall answer the many inquiries concerning the wisdom of various plans depends, of course, on the particular phase of welfare work under consideration. If the inquiry bears on some feature which has been much discussed in the public prints, which has furnished conspicuous failures as well as conspicuous successes, to the confusion of the student, we make an effort, first, to give the subject its proper perspective by setting out the fundamental conditions under which this particular feature of welfare work sprang into existence. Then we give concrete illustrations of plans that have failed and the plans that have succeeded, taking care to throw into bold relief throughout the description the circumstances which unquestionably caused success or failure.

The United States Steel Corporation is planning to build homes for immigrant bachelors. On the general subject of housing in industrial villages, the statement of Mr. C. L. Close, manager of the Welfare Board, in an address in New York last year is of special interest:

"It is believed the essential provisions of water supply, sewerage, lighting, and other requirements for the public health of our towns cannot be fairly criticised. The housing provided by the corporations in these towns is perhaps better suited to the needs of the skilled workmen than to the wages of the unskilled laborer. This is but natural, since the organization of the new plant demands, first of all, a force of skilled men, who must be drawn from older plants where they have established their families. In order to induce them to come to the new plant, provisions for housing them must be fully worked out beforehand, because they will not come and even temporarily shift for themselves, as the unskilled laborers, largely foreigners without families, are accustomed to do in the beginning. Furthermore, no industry in this country has, so far, solved satisfactorily the problem of housing unskilled foreigners whose families have not yet followed them to this country. These men earn low wages, out of which they seek to save the utmost amount possible. They have been accustomed to ways of living which we must try to change, and yet which are much cheaper than those ways in which we wish to have them live."

These are only a few of the subjects, recently covered in connection with the work of various corporations, which describe, beside company's stores and housing, recreation, lunch rooms, club houses, churches, hospitals, town sites, village plannings, and schools for employees' children.

L. A. COOLIDGE.

NOTABLE INSTITUTION HAS ANNUAL MEETING

Associated Out-Patient Clinics Reports Excellent Year, Though Short of Funds—Financial Help to Come

The third annual meeting of the Associated Out-Patient Clinics was held at the New York Academy of Medicine on April 19. Although the work of the association for the past year has been handicapped by lack of funds, the executive committee was able to report a number of important accomplishments, as follows:

Exhaustive standards for surgical and neurological clinics have been formulated, and a chart showing pathologic effects of industrial dusts has been prepared.

The relation of the out-patient department to health insurance has been a matter under discussion. The association voted to appoint a subcommittee to cooperate with the Committee on Social Insurance of the American Medical Association to study the problem of health insurance in its various aspects and applications to the dispensary.

The association also unanimously voted to request its members to contribute $5 each toward the publication of the annual report in view of the fact that the contribution of the New York Foundation has been entirely exhausted and no funds are available for the publication of the report.

The association hopes to receive a considerable sum from one of the philanthropic foundations to enable it to continue its work along the lines hitherto pursued.

The following officers were elected for the ensuing year: Rev. George F. Glover, president; Dr. John Winters Brannan, Howard Townsend, and William V. S. Thorne, vice-presidents; Dr. S. S. Goldwater, treasurer; John W. Fiske, secretary. Dr. E. H. Lewinski-Corwin is acting executive secretary of the association.

After visiting every almshouse in the state, the Illinois State Charities Commission and the State Board of Administration have gone on record as favoring a law which will permit two or more counties to unite for the erection and maintenance of a district home for the poor. The commission also urges on the next General Assembly an enactment which will break up the practice followed by a number of Illinois counties of letting the superintendency of the county farm to the highest bidder on the land and the lowest bidder on the keep of the inmates.

EUROPE'S WAR HOSPITALS

May Be Installed in an Hour—To Do Efficient Work—Killing Is Done by Machines, but Healing Is Done by Men and Women

The practice of medicine and surgery seems to be almost the same in peace and in war. In the one case we deal with the individual, and in the other with large groups; but just as in peace we find some physicians and some surgeons busying themselves in every waking hour with the care of a very few patients and seeming never to be done with their tasks, so in war we find poorly organized effort producing infinitely small results. On the other hand, there is a common saying that it is only busy men who have time to do things—that is to say, it is only busy men who have their business organized in such a way that they can do many things. In war, organization is everything, and the European war is no exception to the rule; indeed, it is an emphasis of this rule because it is on such a huge scale.

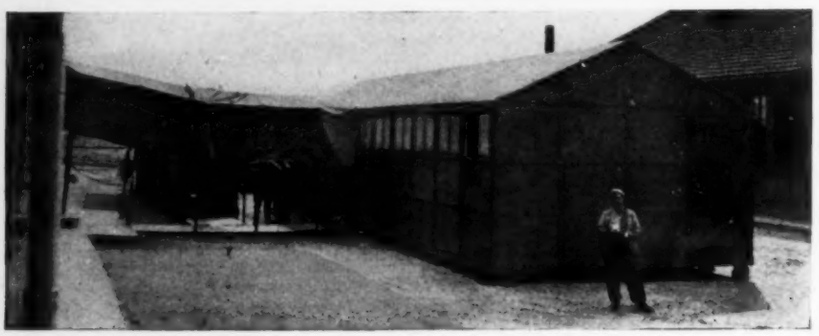


Fig. 1.

Theories and practice do not always jibe well with each other, and theories concerning the practice of medicine and surgery and the administration of hospitals, and often, indeed, the practice of medicine and surgery and the administration of hospitals in times of peace, may go along indefinitely—poorly organized, yet without comment, and without anyone appreciating the fact that the organization to do the work is poor; yet, when war comes, and it is necessary to care for thousands, even hundreds of thousands, of sick, then poor organization in the medical and hospital departments is emphasized at once.

When war comes, no medical corps is ever ready; that is naturally so. Just as the surgeon without experience is never a skillful surgeon, so a medical department of a government is never efficient excepting under pressure of actual experience.

Europe has now had the experience of taking care of great numbers of people during sickness and injury, and during periods of the greatest stress, such as comes in the sudden propulsive movements of battle, and a good many of our far-flung theories of hospital administration have vanished, have proved themselves wholly unequal to the strain—that is to say, they have proved themselves mere theories that do not work in practice.

There are many lessons for hospital administrators to be gained by a study of the medical service in the European war. Last month we had something about the transportation of the sick and hurt, and we applied those lessons to our modern hospital administration; the month before we had apparatus and equipment for the care of the individual in the hospital. This month we are permitted to study somewhat the employment of emergency hospitals on the European battlefields, thanks to the brilliant report of Surgeon A. M. Fauntleroy, of the navy, and to Surgeon-General Braisted, who has so kindly allowed us to use the illustrations in that report.

Running rapidly through Dr. Fauntleroy's report, we gather that not a great deal of serious study of theoretic organization has been wasted in the creation of the hospital service—at least in the allied armies. When the war broke, the peace hospitals were on about the same plane as our own; in most of them, no doubt, it took a dozen people to admit a single patient and to get him to bed, and red tape was the rule just as it is with us; but all that red tape was quickly found to be unserviceable and it became necessary at once to change the order, so that one man might admit a dozen sick or hurt soldiers, and it also became necessary to create hospital conditions so that one person, whether surgeon, the assistant, orderly, or nurse, could do the maximum amount of efficient service for the greatest possible number of patients in the shortest time with the least waste of energy, and it may be fairly assumed that at the time that Dr. Fauntleroy was an observer on the western battle fronts, the workableness of hospital administration had arrived at its highest possible achievement.

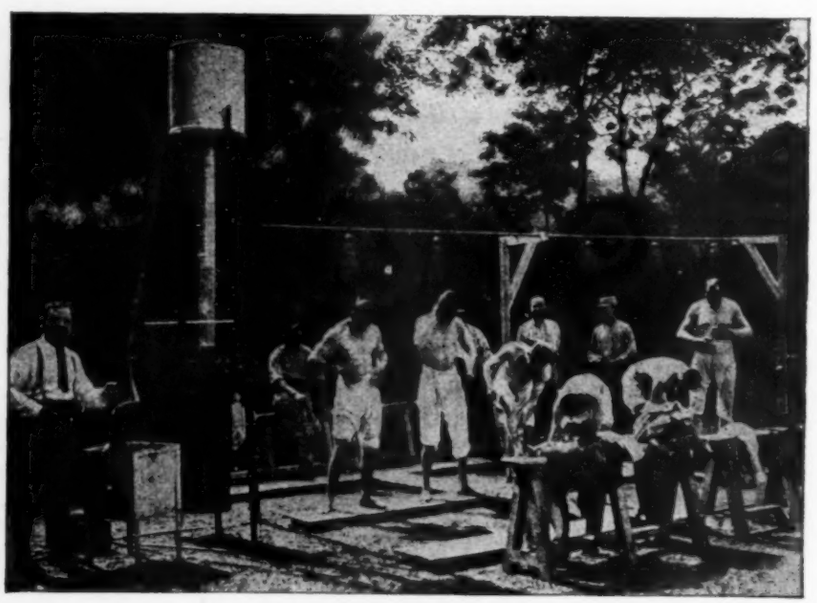


Fig. 2.

Without going into the technical character of hospital service in war, we might just run rapidly through the variations of that service. There is, first, the sheltered knoll just behind the battle front, or, indeed, there is a niche in a trench to which the wounded may be taken for first aid and temporary dressings; then at the earliest possible moment they are moved back to the field hospital,

where the rudest surgery can be done on the most necessitous cases, such as the stopping of a hemorrhage or the care of a perforated wound of the intestine or stomach. At this point, too, the patient may be tided over the period of shock and then started on the longer journey back to the base hospital, from which place he can be taken home, and finally to a convalescent hospital if there is a hope that he may be restored to health, so that he can rejoin the troops.



Fig. 3.

At all the way stations—that is, the field hospital and the base hospital—it is sometimes necessary to do quick equipment and to prepare for the care of great numbers of injured as the result of some unexpected battle, and just at this point is where our most graphic and insistent lesson comes in. We are accustomed to think in terms of months and even years of the installment of a power and light plant, of the equipment of an operating unit, a kitchen, an admission unit, and all other units that go to make up a permanent hospital. An hour is a sufficient amount of time to install a hospital on a European battlefield to do modern successful, efficient surgery on a wholesale scale, and to get the patient onto the table and off again and into bed—far more quickly than can be done in the most perfect peace institution at home.

In order to do this, there are now mobile units, and four or five motor trucks can carry everything necessary to the complete hospital. The illustrations show this better than almost any descriptive writing could do. Note the operating room in one of the illustrations, with building on one side and a motor truck on the other (Fig. 1). This operating unit was put up in perhaps less than an hour. It is fitted with live steam, electric light, hot and cold water, and an infinite variation of all of these from the motor truck alongside. The patient is taken into the operating room, the operation performed, and he is taken again into the adjoining building and put to bed. Another illustration shows patients being given an admitting bath in a wholesale way (Fig. 2). A motor truck carries hot and cold water to furnish the showers. Some patients can bathe themselves, others need to be helped, and still others must be wheeled under the shower and bathed entirely by someone else. Note another picture showing an operating room classically simple in its appointments (Fig. 3). How easy it will be to keep this room perfectly clean. Note another picture showing a ward set up in the midst of a drawing room (Fig. 4); the portable solution rack in the left foreground, the bedside tables at the right, and the beds were the work of a few minutes to install; note patient's record on the foot of the bed in the foreground and the electric light overhead.

One can well imagine that these field hospitals, with their motor trucks, could be installed almost as quickly as a fire department in one of the large cities gets to a fire, and the assembling of the apparatus and the starting of the machinery would take almost no longer than it does the engine and hose carriages to set up business and begin playing on a fire.

It has been said that war is no longer a thing of men, but has grown to be a huge piece of machinery; no doubt that is true in so far as the destruction of life is concerned. One turns the crank of the machine gun and mows down men by hundreds; one looks through a mirror, indicates the target miles away, plays on his keyboard, and the huge gun tears away a block of buildings. But it is not true that the constructive, beneficent, merciful side of war is the business of the machine. It is man-made and woman-made; efficiency comes from the individual and not from the mass. The very simplicity of equipment for the care of the wounded in war emphasizes the fact that it is not machinery that brings efficiency, but it is the skillfulness of men and women. In other words, it is the personal equation. So it is in our hospitals at home; better a few dollars for equipment and a master director of a department than the most elaborate equipment ever designed, with a director of mediocre ability.



Fig. 4.

The need of a local hospital is being agitated at Clinton, Ind.

CURRENT HOSPITAL LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature.
Army Medical Museum and Library, Office of the Surgeon-General, United States Army.

Hospital Train. Ed. The Nursing Times, 1916, XII, No. 569.

The Great Western Railway has equipped a model hospital train for use in France. It is over 960 feet in length, and contains, besides the general wards and staff accommodations, two isolation wards and a convalescent department. The beds are arranged in three tiers, utilizing all space. Traps are installed and drain into large receptacles in order to sterilize excreta, etc. The interior is painted a yellow ochre color, and is not especially pleasing to the eye.

Liability of the Proprietor of a Hospital for Injuries Inflicted by Reconvalescents Employed as Assistant Nurses (Der Besitzer einer Krankenanstalt haftet für den von Rekonvaleszenten in ihrer Eigenschaft als Hilfskrankenwärter verursachten Schaden). Zeitschr. f. Krankenanstalten, Leipzig, 1916, XII, No. 9.

A patient was treated at a private hospital for pneumonia. Being in a highly febrile condition, he jumped out of his bed, but a reconvalescent, whom the chief nurse had appointed to supervise the ward temporarily, threw him back on his cot with such force that the patient's spine was fractured. The injured man sued the proprietor of the hospital for damages. He lost his case in the lower courts, but the supreme court (Reichsgericht) decided in his favor, the proprietor of the hospital being compelled to pay him an annuity of $300.

The Value and Importance of Maternity Hospitals. E. Gustav Zinke, M. D. Jour. of Michigan State Medical Society, 1916, XV, No. 4.

A plea for more and better maternity hospitals in order to reduce maternal and fetal morbidity and mortality. Every physician, no matter how favorable his experience in obstetrics may have been, should always realize that pregnancy from the beginning to the end is, under the most favorable conditions, an event of grave importance. The author compares the advantages and accommodations of the hospital to the home, and also the additional cost to the patient in the hospital in comparison to added work and worry of the management of labor in the home. It is best to disregard individual cases and assume the problem in its entirety, and, whatever is best for suffering womankind, that must we do.

The Municipal Hospital Vittorio Emanuele III. in Tripolis. Dr. P. Tria. Riforma medica, Napoli, 1916, XXXII, No. 11.

When the Italians took possession of Tripolis, they at once proceeded to organize the social and hygienic services. As the population is very mixed, the hospital service has to contend with many difficulties. The Vittorio Emanuele Hospital receives Christians, Hebrews, Arabs, and Greeks, and has established special wards for the various nationalities. In many cases special foods have to be prepared for these patients. The author complains that there are not sufficient means to meet the present conditions in Tripolis. He says that Italy has made less progress in hospital conditions during the last thirty years than other countries. Thus from 1902 to 1907 the hospitals of Italy increased only 5.5 percent, while the hospitals of Norway increased during the same period of time 17 percent and those of Germany 15 percent.

Laboratories, Hospital. Ed. The Journal of the Amer. Med. Assn., 1916, LXVI, No. 15.

The author questions whether the American hospital has done its proper share in recent years to encourage the support of a department so potent for progress. Few independent hospitals and many of the larger teaching institutions can claim equipment only for routine work. This is due not only to indifferent members of the profession, but rather to those who are responsible for the financial support and maintenance—namely, the board of trustees, composed principally of laymen. The functions of the laboratory may be summed up as follows: (1) to aid in the diagnosis, and therefore the intelligent treatment of disease; (2) to investigate new methods of diagnosis and treatment, and put them into use with the least possible delay; (3) to advance, by investigation, our knowledge of the cause, course, diagnosis, and treatment of disease. The trustees must be awakened, where necessary, to an intelligent conception of the real value, to the hospital and the community, of the laboratory as a factor in the elucidation of the problems of disease.

The Work of a Service for Cerebrospinal Meningitis in a Hospital at the Front (Fonctionnment d' un service de méningites cérébro-spinales dans un hôpital de l'avant), J. Pignot and J. Terrace, Paris médical, 1915-16, V, No. 28.

In one of the French armies at the front a considerable number of cases of cerebrospinal meningitis occurred. To have transported these patients into the interior of the country for treatment would have resulted, without any doubt, in the death of most of them. A special hospital was therefore established for these patients immediately behind the front. As soon as a soldier showed the first symptoms of cerebrospinal meningitis he was at once removed to this hospital and subjected to an energetic serotherapy. So successful was this service that of twenty-six patients treated at the hospital twenty-two completely recovered, which shows that an early serum treatment in this disease is essential for a cure.

Contagious Hospitals, Aseptic Technic Method for. David Murray Cowie, M. D. Jour. of the Mich. State Med. Soc., 1916, XV, No. 5.

The University Hospital has put into operation, as an investigation, the aseptic technic method, ignoring the "within three feet of the bed" and the air-borne theory, and have supported the idea that the great majority of contagious and infectious diseases are communicated by either direct or indirect contact. Proof of this theory would result in a great economic factor in contagious work, as, for example, a nurse who is not fully occupied with the needs of a single patient may be utilized to care for several, thereby increasing the efficiency of the nursing staff.

During the college year 80 students made over 800

visits to the bedsides of highly contagious patients, 35 nurses served on an average of 46 days each; 22 doctors made frequent visits to the wards and 3 members of the staff were in constant attendance. All of these people, including maids, etc., observed the rigid technic, and, as a result, no infection was carried outside and only one intern contracted scarlet fever. Only 2.23 percent of patients contracted a cross infection, and these at a time when the wards were crowded and were probably caused by breaks in the technic.

A Visit to the Hospital Establishments of the Red Cross at Lyons (Visite aux installations hospitalières de la Croix-Rouge de Lyons). Bulletin internat. di Sociétés de la Croix-Rouge, Genève, 1916, XLVI, No. 185.

By an agreement between the governments of France and Germany, all prisoners of war who are so seriously wounded that they will not be able again to serve in the army, are to be returned, by way of Switzerland, to their home country. A great number of such prisoners of war have already been exchanged between the two countries. The French soldiers returning from Germany are received and cared for by the French Red Cross. This organization has established a number of hospitals in and near Lyons for the reception of the unfortunate soldiers. For the tuberculous patients a special hospital was established in a sunny, salubrious region some kilometers from Lyons. In all these hospitals trained Red Cross nurses are employed. According to their injuries, the patients are taught various occupations. Thus the blind learn brush-making, basketmaking, massage, etc. Those who have lost their lower extremities are taught to patch shoes, etc. The international Red Cross committee who visited these hospitals was most favorably impressed with the work and the results accomplished.

Occupation as a Remedial Factor in Hospitals for the Mentally Sick. Emily L. Haines. Boston Med. and Surg. Jour., CLXXIV, No. 17.

Work is a remedial factor, and occupation, in a greater or less degree, for each patient, according to his or her personality, gives diversion, interest, and benefit. Work affords mental and physical exercise to the patient and represents an economic value to the institution. Appropriations for shops for various mechanical and handicraft pursuits would be of value. Such shops and industrial rooms, to be ideal, should be light, sunny, and in every way attractive; they should possess unforeseen appeals and possibilities for the work which will invite daily attendance. The list of occupations is varied, including the weaving of toweling, denim, blankets, and rugs. Basketry is a mode of occupation, also rug making, while pottery is one of the late crafts. Occupation as a remedial measure is a field with far-reaching possibilities.

The New Hospital at Moss (Moss nye sykehuser). Dr. T. Nannestad Tidsskrift f. d. norske Laegeforening, Kristiania, 1916, XXXVI, No. 5.

The town of Moss, in southern Norway, with about 4,000 inhabitants, has replaced its old hospital, which was erected in 1848, by a new building. It is a two-story structure, with a basement and attic, and has room for about 30 patients. Both floors are traversed from east to west by a central corridor, 2.75 meters wide. In the center the corridor widens out to 4.25 meters. This space serves as a parlor for the patients. The sick rooms are ranged on both floors along the south side of the building. On the north side are the sterilization, operation, and x-ray rooms, the kitchen, rooms for the nurses, etc. The hospital is lighted by electricity and has a central warm water heating plant. This very practical small hospital was completed at an expense of only 140,000 crowns (about $38,000).

The Control of Hospitals in the Greater Interest of the Profession. R. C. Fish, M. D. The Med. Council, 1916, XXI, No. 4.

The question of the appointment in the usual way, or selection after competitive examination, of applicants for hospital positions and staff service is a matter needing wide and courageous action. By present methods, in some hospitals, many bright men are practically debarred. Hospital competition in cities of 30,000 and over is compelling many good men to seek hospital service or enter nonmedical employment. The disappointed ones, unless men of iron, are apt to stoop to chicanery and illegal practices, and that not wholly of their own volition, but because of unjust conditions brought about by unfair hospital administration. Some abuses would be corrected by placing all hospital positions on a basis of competitive examination. Hospital reform and professional freedom should go hand in hand. We depend too much on business men to manage our hospitals. There should be reorganization of hospitals, with short terms for trustees and with medical members preferred; a competitive basis of attainment for surgeons and physicians in hospital service; favoritism of some special college should not be permitted; ward service should be a promotion from out-patient service.

The New Military Hospital at Venlo (Het nieuwe militaire hospital te Venlo). Dr. C. J. Prins. Mil.-geneesk. Tijdschrift, Utrecht, 1915, XIX, No. 3.

The new military hospital was opened in August, 1915. It is situated on a portion of the extensive grounds of the military post at Venlo. The hospital consists of a large two-story central building and four one-story pavilions. The ground plan has the form of a rectangle. The four pavilions are placed in the four corners and the main building is in the center. All five buildings are connected with each other by covered galleries. The central corridor which traverses the main building in its full length is extended at each end by a covered gallery, which meets the gallery connecting the two pavilions at each end at a right angle. The hospital is surrounded by a beautiful park.

Placing and Keeping Patient on Hot-Water Bag. Jour. of the Amer. Med. Assn., 1916, LXVI, No. 15.

Recently the Supreme Court of Oklahoma affirmed judgment for $2,500 damages in favor of the plaintiff against a physician and a sanatorium. The plaintiff employed the defendant to perform an operation for hernia. During the operation the patient went into collapse and was removed to a recovery room. Hot-water bags were used to warm the bed, and by mistake the patient was placed and held on an overheated bottle and suffered severe burns. The jury found ample evidence to justify them in finding that the physician had not exercised proper care. There was no contention that the judgment against the sanatorium was not warranted, nor could it be said that the judgment was excessive.

Dr. Joseph H. White, of the United States Marine Hospital at Memphis, Tenn., has been detailed to serve as director of a campaign against malaria, which is being waged by the malaria conference of Tennessee, Arkansas, and Mississippi. Under the direction of the conference, Bolivar county, Mississippi, is said to have entirely eliminated malaria from within its boundaries last year at a cost of $40,000.

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DEPARTMENT OF NURSING

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Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

The New Orleans Convention

The New Orleans convention of 1916, at which were registered over 600 delegates representing thirty-nine states, will, we believe, stand out as one of the most important gatherings of the three national organizations of nurses. From the opening meeting at the Athenæum on April 27, when the organizations were most graciously welcomed by Mr. Newman, commissioner of public safety, and Miss Gillespie, the president of the Louisiana State Nurses' Association, and when Mr. Rosen, of the board of the Touro Infirmary, gave his interesting address on the "Influence of Laws Regarding a Profession on the Profession Itself," until the last night, May 3, when, under the auspices of the National League of Nursing Education, Dr. Rudolph Matas, of the department of surgery, Tulane University, most sympathetically and comprehensively presented the growth and expansion of nursing education that had definitely placed nursing among the professions, and Dr. Brandt Dixon, president of Sophia Newcomb Memorial College, gave his scholarly address on the higher education of women and its relation to the education of the nurse, the interest of the members in the comprehensive and varied program never abated.

Questions of no small moment were presented and received the favorable consideration of the members of the three organizations where they were jointly concerned, or of the individual organizations where the matters pertained only to that particular body.

The most important changes determined on were the incorporation under a national charter, biennial meetings, and the adoption of the delegate convention system of representation. That changes of such consequence could be accepted was due to the very efficient work and clear presentation of the subject of the revision committee under its able chairman, Miss Sarah E. Sly.

The acceptance of the by-law providing for the formation of sections brought into immediate existence a section on private duty nursing with Miss Ott, of Indiana, as chairman, and a mental hygiene section, with Miss Elnora Thompson, of Chicago, as chairman.

The Advisory Council, which is composed of the boards of directors of the American Nurses' Association, the presidents of the state associations or their representatives, and the chairmen of sections, promises to be a very valuable body through which to reach the nurses at large. Many of the questions of importance were presented to this body for consideration and recommendation before being presented to the delegates.

The Bureau of Legislation, under Miss Mary C. Wheeler, of Chicago, presented its revised list of schools of nursing accredited by state boards of nurse examiners, and also the list of registered nurses by states. This list showed the total number of registered nurses in the United States, at the date of the issuance of this pamphlet, to be 70,218.

The work of the so-called Subcommittee on Legislation, with Miss Anna C. Jammé, director Bureau of Registration of Nurses, State Board of Health, Sacramento, Cal., as chairman, had so increased in scope that it was decided to make this a separate committee and to refer to it all questions concerning the statutory control of the practice of nursing and nursing education. It is hoped that through this committee a greater uniformity in state laws and state curriculums may be encompassed.

The legislative session was one of the most interesting sessions of the convention, and at it papers were presented by Miss Eyre, of Colorado, on "Standardization of State Requirements for Training Schools for Nurses;" by Miss Hilliard, inspector of nurse training schools in New York state, on "Methods of Inspection;" and by Dr. C. A. Bohn, of New Orleans, on "The Present and Future of Reciprocity." In addition to his most interesting and suggestive paper, Dr. Bohn presented at the round table following this session his exceedingly comprehensive schedules for inspection and accrediting of schools.

Two papers of unusual interest and importance were those presented by Dr. M. Evangeline Jordan, of Los Angeles, Cal., on "The Care of the Mouth During Pregnancy," and by Assistant Surgeon C. V. Akin, of the United States Public Health Service, on "Plague Eradication and Prevention in New Orleans."

The evening devoted to Red Cross work was a notable one. Miss Delano reported that over 600 nurses were serving on the state and local Red Cross nursing committees that had been organized in every section of the United States since the affiliation of the American Nurses' Association with the American Red Cross nearly seven years ago, and that the total enrollment of Red Cross nurses is now 6,200. She gave a most illuminating account of the assistance that has been rendered by the Red Cross in our own country, as well as of the work that has been done in Europe during the war, stating that units had been maintained in England, France, Belgium, Germany, Austria, Russia, and Servia, and that 255 nurses had been sent over. It was of special interest to learn at this meeting that Louisiana was among the first states to appoint committees on Red Cross nursing service, with Miss Emma L. Wall as chairman of the first committee. It is also interesting to note that the first applications for enrollment as Red Cross nurses received in Washington came from New Orleans, and to New Orleans also belongs the credit of having called out for relief work the largest proportion of their total enrollment of any committee. During the Mississippi floods in 1911 the Louisiana committee was asked to send nurses to aid in relief work and nearly one-half of the total enrollment responded.

Dr. Dowling, president of the Louisiana State Board of Health, followed Miss Delano with his interesting paper on "The Red Cross Nurse in Time of Disaster." Miss Babb, of Greenville, S. C., presented a charming paper entitled, "How a South Carolina Community Provides for Sanitary Inspection," while Miss Gladwin's simple, but most pathetic, story of her tragic experience in Servia will not soon be forgotten.

This is but the briefest and barest outline of a convention that cannot fail to bear fruit in many fields.. For the most unusually interesting program, every detail of which was carefully scheduled, the organizations were indebted

to Miss Martha Russell, of New York, and Miss Effie Taylor and Miss Mary Lent, of Baltimore.

The organizations also feel deeply indebted to Miss Emma L. Wall, and to Miss Daspit, her assistant, as well as to their associates, for the efficient way in which the entire convention was managed and the unceasing thought that was given to the comfort, pleasure, and even the health of those in attendance. Groups of student nurses acted as ushers throughout the proceedings and carried messages to and fro. Through the Federation of Women's Clubs and Dr. Barr, of the Young Men's Christian Association, a very beautiful musical program was provided for the mass meeting on Sunday and for the social hours. A most restful and delightful break in the deliberation of the sessions was the beautiful river trip provided by the sisters of Charity Hospital and of the Hotel Dieu. On the day after the convention Sister Stanislaus, superintendent of Charity Hospital, arranged for a visit and personally conducted a group of remaining nurses to the leper colony.

A full account of the proceedings and of the papers presented at the meetings of the American Nurses' Association, as well as many of those read at the meetings of the two other organizations, will appear in the June, or convention, number of the *American Journal of Nursing*. Copies may be secured through the editor, Miss Palmer, at the Rochester office. Papers of particular interest to the readers of the *Public Health Nursing Quarterly* and THE MODERN HOSPITAL will appear in later issues of these magazines.

A synopsis of the proceedings of the National Organization of Public Health Nursing, together with the names of the newly appointed officers, has been promised for the July issue of THE MODERN HOSPITAL.

The officers of the National League of Nursing Education for 1916-17 are:

President, Sara E. Parsons, R. N., Massachusetts; first vice-president, Anna C. Jammé, R. N., California; second vice-president, S. Lillian Clayton, R. N., Pennsylvania; treasurer, Mary W. McKechnie, R. N., New York; secretary, Effie M. Taylor, R. N., Maryland.

Executive Committee: Louise M. Powell, R. N., Minnesota; Elsie M. Lawler, R. N., Maryland.

Officers of the American Nurses' Association: president, Annie W. Goodrich, R. N., New York; first vice-president, Adda Eldredge, R. N., Illinois; second vice-president, Elsie M. Lawler, R. N., Maryland; secretary, Katharine De Witt, R. N., New York; treasurer, Mrs. C. V. Twiss, R. N., New York.

Board of Directors: Jane A. Delano, R. N., Washington, D. C.; Mary M. Riddle, R. N., Massachusetts; Ella P. Crandall, R. N., New York; Helen P. Criswell, R. N., California; S. Lillian Clayton, R. N., Pennsylvania; Mathild Krueger, R. N., Wisconsin.

The New Profession of Public Health Nursing and Its Educational Needs[1]

BY C. E. A. WINSLOW, ANNA M. R. LAUDER,

Professor of Public Health Yale Medical School, and Curator of Public Health American Museum of Natural History, New York.

Many of the professions which play an important part in the social organism of today can trace their ancestry back through centuries, some of them even to the dawn of recorded human history. The doctor, the lawyer, the soldier of the Athens of Pericles would be vastly puzzled by the technic of his modern representative, but he would find essential aims and general methods in the main familiar and comprehensible.

The sick-nurse may claim kinship with an equally ancient and an equally noble line. As the lawyer owns a continuity of interests with Lycurgus and the physician with Hippocrates, so those who nurse the sick are carrying on the beneficent work of the deaconesses in the early Christian Church and of the Sisters of St. John, St. Francis, and St. Vincent de Paul in medieval times. Nursing, in its original sense, is one of the most ancient of all businesses; for, as soon as mankind emerged from brutishness, the care of the sick and wounded became a pressing need.

There is another group of nurses, however, engaged in work of a widely different character, work which has so little in common with the nursing of older days that St. Hildegarde would never in the world own its practitioners as her professional successors. I mean, of course, the public health nurses, who make up, as I believe, the nucleus of one of the greatest of future professions, a profession whose entire aim and method of approach is characteristic of the modern world.

The demand for the services of the public health nurse is an outgrowth of the shift of emphasis in the public health campaign from legal and restrictive to educational and constructive measures. Some important things, like the purification of public water supplies, can be directly accomplished by official action, and legal restrictions are and always will form an essential part of the control of communicable disease, yet it is more and more clearly recognized that the larger problems of health require the intelligent cooperation of the individual citizen. An increasingly greater proportion of the energy of public health workers is devoted to individual education in the sanitary and hygienic conduct of the daily life, and this direct educational work is mainly the task of the public health nurse.

We owe the conception of the community nurse perhaps, first of all, to Florence Nightingale, who gave this new branch of her calling the name, "health nursing." We owe its practical working out in this country largely to our American Florence Nightingale, Lillian D. Wald. It was she who in 1902 introduced school nursing, recently inaugurated in London by Miss Honnor Mortem, into the schools of New York city. The nurse placed in the schools by Miss Wald was so successful that $30,000 was appropriated for an official beginning of the work in the following year. Today 208 nurses are employed in school inspection by the New York City Department of Health, besides 59 infant hygiene nurses, 162 tuberculosis nurses, and 117 visiting nurses engaged in other fields of public health. So far as the betterment of the health conditions of school children is concerned, the work of the nurse is now recognized as vital and essential because it is she who follows the children into the home and sees that the physician's directions are actually carried out. As has been said, the school doctor excludes the child from school —the nurse brings it back again. The percentage of physical defects actually treated among New York city school children was raised from 6 percent to 84 percent by the introduction of the school nurse.

The application of the educational force of health nursing to the problem of tuberculosis was again due to the far-sightedness and organizing ability of Miss Wald. In this new field of social hygiene the nurse has come to play a more and more important part, for the campaign against tuberculosis is primarily a matter of individual conduct, care of the excreta on the sanitary side and rational treat-

[1]Read before the Second Pan-American Scientific Congress, Washington, January 4, 1916.

ment of the living machine on the hygienic side. The most direct and immediate method of attacking this complex problem lies along the line of personal instruction in habits of healthful living, and one of the greatest needs of the present day is for an increased force of tuberculosis nurses to detect the early cases which now so often escape treatment until too late. It is estimated that in the home of every recognized case of tuberculosis there will be found on the average one incipient case in the condition most favorable for treatment.

The third important field for the visiting nurse is in the reduction of infant mortality, one of the newest and one of the most hopeful of all forms of public health activity. It is clearly recognized today that there is just one effective way to cope with this great problem—the instruction of the individual mother—so that she may give her baby its normal food and may intelligently care for it in other ways.

The distribution of pure milk, for which "milk stations" were originally founded, is now entirely secondary to the organization of a baby clinic, with its staff of nurses to do follow-up work in the home. As Dr. J. H. Mason Knox has said, "In the last analysis, however, all our work hinges on the better care of individual babies coming under our influence, and it is here that the trained nurse should be given the first place, both because of her unique opportunity and because of the good results which she has accomplished and does accomplish. It is she who enters the home, a welcome visitor, but one armed with expert knowledge and kindly act. It is she who can open the closed windows, remove superfluous clothes, prepare the baby's feedings, give it a bath as an object lesson to the mother, and perform a hundred other services which together mean the difference between life and death."

I have spoken of these three aspects of public health nursing which relate to infant welfare—tuberculosis, and school hygiene—as if they were distinct and independent specialties. This has often been the case in the past, but the wisest leaders of the nursing profession, as well as practical health administrators, have come to recognize that specialization along this line has frequently been carried much too far. Friction and confusion result from the visit to one home of several different public health nurses, and the large area covered by a nurse doing only infant welfare or only tuberculosis work causes waste of time, and militates against intimate personal knowledge of family and social conditions. Public health nursing should be organized on the lines of localities rather than specialties, so that the nurse may know her district thoroughly in all its aspects, and may come to be a sort of community mother, a trained and scientific modern representative of the good neighbor who nursed the sick and helped out in all sorts of emergencies in the village life of earlier days.

In rural districts, where the services of public health nursing are being carried by the rural nursing service of the American Red Cross, any high degree of specialization is still more clearly impossible. These devoted women must be visiting nurse, tuberculosis nurse, infant hygiene nurse, sanitary inspector, and welfare worker all in one. Above all, they must be able and willing to teach, teach, teach. The following paragraph from the regulations of the Red Cross strikingly illustrates the breadth of the field which lies before them:

"Rural nurses, although primarily responsible for the efficient care of patients, are expected to take an active interest in families, teaching by instruction and demonstration the principles of hygiene as applied to their homes and surroundings, as well as of person. They should know the health laws and what opportunities exist in their community for the improvement of unsanitary and other unfavorable conditions in which their patients live. They should be informed on social matters, and avail themselves of educational advantages within their reach to enable them to meet more adequately the needs of their people. With the support of an able and enthusiastic committee, they have unlimited opportunities for constructive work through the homes, interested individuals, private societies, country schools, and other public institutions."

Nurses are called on today to serve as sanitary inspectors, as tenement inspectors, as probation officers, as teachers of hygiene, as hospital social service workers, as agents of charity organization societies, and as welfare workers in large industrial plants. Professor Adelaide Nutting, of Teachers' College, showed me some letters that came to her desk at the opening of the fall term this year, and I shall cite extracts from them to show the sort of thing that is being expected of the nurse today:

Extract from a letter of a physician in a western city:

"I am writing to learn if you can recommend a nurse who would be capable of teaching hygiene and sanitation in the public schools of this city, as well as do the work of a general school nurse. We would like a nurse who is mature and capable of teaching as well as doing the school nursing. There are about 3,000 pupils in the public schools here. . . ."

Letter from a superintendent of schools in the South:

"We do not have either an organized truant officer or medical inspection and school nurse in our school system. As a start toward these objects, I am asking for $—— from our Board of Education for a truancy officer, hoping to be able to get in that position a woman with training as school nurse, and have her do such school nurse work as she can in connection with her truancy work."

Extract from a letter from a superintendent of schools:

"I have just been talking with ——, superintendent of schools at ——. He wants a school nurse. . . . This is a new position, and he is inclined to give the right woman quite a free hand. He says they have 1,800 children in the school and practically no foreigners. . . . Wishes this school nurse to assist the physical education instructor in medical inspection. During the year they conduct some Chautauqua work, where the nurse would have an opportunity to deliver lectures to the farmers' wives. They also have a summer school, where they emphasize domestic science, domestic art, and general industrial training. The nurse might be asked to supervise the playground activities, but this could be arranged later on. Mr. —— wants to find a woman who is adaptable and who would be interested in remaining for some time. Emphasizes social training, and would like to find a woman of considerable enthusiasm as well as special training."

Letter from the president of a western normal school:

"We are planning to secure a school nurse for the coming year. Our enrollment this year was 214. We have from 75 to 90 girls in the dormitory. In addition to taking care of the health of the girls in the dormitory, we shall desire the nurse to take charge of the physical education of the young women, and also of the medical examination and general school health of the children in the "training school," numbering about 150. We shall also expect her to have about one class per day in the normal school department along her line. Probably this will seem enough for her to do, but, if possible, we should like to have her take up the problem of health and necessity of medical examination in the rural schools, and will assist her in making such investigations as she may see fit. . . ."

Letter from a physician on the staff of a hospital in one of the large eastern cities:

"During the past year I have been developing a clinic for the investigation and treatment of diseases of metabolism in one of the large hospitals in —— along lines similar to the work carried on in the —— and ——. Our work thus far has been confined to the treatment of diabetes mellitus and nephritis. The board of managers of the hospital are very much interested in the work, which has been productive of the most gratifying results. Thus far I have been greatly handicapped because of the lack of knowledge on the part of the pupil nurses of the principles of dietetics and the elementary principles of metabolism, and even more handicapped by the fact that we have no teaching nurse who is able to instruct the pupil nurses. It is my plan to secure an educated trained nurse who will come into the hospital, supervise the care of the patients in this ward, and also act as a teacher in the nurses' training school. The position will be one of dignity, and will carry with it a reasonable salary. The board of managers of the hospital has instructed me to negotiate for such a teacher. I am appealing to you for assistance in securing such a person. Will you kindly

let me know if any of your graduate or present students are or will be available for such work?"

It is quite clear that the woman who enters the field of health nursing today is called on to perform duties of a diverse sort, differing in marked degree from those performed by the bedside nurse of a past generation—to such a degree, indeed, as almost to constitute this a new profession; yet it is clearly to the nurse rather than to the physician or the social worker that we must turn for the application of this new form of social energy.

In the first place, the nurse is a woman and as such is preeminently fitted for the function of health educator. Patience and tact are primary requisites for the task of bringing the principles of hygiene into the life of the tenements, and neither of these is a masculine quality. In the second place, the nurse has at least the fundamental basis of technical knowledge needed. She knows the human body and its reactions to external conditions and to the hygienic conduct of life. She approaches these questions from perhaps a better viewpoint than even the physician, since her training leads her to view the human mechanism as a unified whole, her vision of which is not distorted by preoccupation with special pathological conditions. It must be remembered that in most small and in many large places the only public health nurses are those employed by visiting nurse associations who combine educational work and sick nursing; and, however socialized and preventive the work of the public health nurse may be, she must be ready at a moment's notice to forget the community of tomorrow and relieve with her own hands immediate physical distress. Her influence for more fundamental things rests on her power to meet these instant needs. For this reason the social worker without a nurse's training can never fill the place of a nurse who has gained the broader vision of social service.

While the education of the nurse lays the best type of foundation for the career of the personal public health educator, it becomes increasingly manifest that this foundation must be laid more broadly and deeply than is the case at present if she is properly to fulfill her function.

Public health nursing, like any other educational work, requires a particularly sound training in fundamental principles. The public health nurse should be well grounded in the fundamental sciences of chemistry, physics, and biology, for these sciences form the basis for all scientific thinking and all scientific applications. She should know something of the principles of sociology and economics, for her work closely correlates at every point with that of the social reformer. Foreign languages are of the greatest importance; in any given case, knowledge of Italian or German or Yiddish may be absolutely essential. I heard recently of a case where Chinese was a requisite. These subjects—elementary science, elementary sociology, and, if possible, some foreign languages, with the training in English so essential for the writing of reports and the educational work of the inspector—are vital cultural or nontechnical elements in the training of an efficient public health nurse. The requirement of high school graduation before entrance on the course of the nurses' training school seems a very moderate minimum of preliminary general education for the nurse who is planning to enter the field of public health. The present class of nurses in the Massachusetts General Hospital in Boston includes nineteen graduates of first-class colleges and seventeen graduates of normal schools. Thirteen or fourteen of these women speak French, nine speak German also, and several Italian as well. The Presbyterian Hospital of New York has twelve college women in its training school at this time.

The next problem is the nature and scope of the course to be given in the training school itself. It is a matter of common knowledge that few such schools are today in a position to give to their pupils the training necessary to fit them adequately for the work of health nursing. Over 1,000 such schools have come into existence since 1890, but their establishment has often been inspired less by educational ideals than by the desire to obtain unpaid assistance in the routine work of the hospitals with which they are connected. Too often standards of admission, which are of such importance in a profession demanding unusual physical and mental and personal qualifications, are sacrificed to the need for student nurses to do the work. Too often the applicant, once admitted, is subject to severe conditions of overwork and underfeeding and poor living accommodations. Always there are the educational weaknesses inherent in an undertaking which is not primarily educational in aim. The course is apt to be carelessly planned, the teachers those who chance to be available, the teaching what they happen to find it easiest to give, and the laboratory equipment hopelessly inadequate. Most fundamental of all is the problem of time. It is absurd to attempt to train the nurses we need for the public health campaign by a course which involves two or three hours a week of theory and fifty to sixty hours in the wards—not hours of clinical instruction, but for the most part a routine of unenlightening and exhausting manual work. The relation between the hospital and the training school should be a symbiotic one; it more nearly resembles a case of simple parasitism.

The Committee on Education of the League for Nursing Education has outlined a standard curriculum which calls for a total of 675 hours of theoretical instruction, 360 hours to be concentrated in a preliminary period of four months, with no work in the wards, 75 hours in the second half of the first year, and 60 hours in each of the other four half years. This curriculum includes 60 hours of anatomy and physiology, 30 hours of bacteriology, 30 hours of chemistry and physics, 15 hours of hygiene and sanitation, 90 hours in cookery and nutrition, and 30 hours in household economy, in addition to the more technical courses in the nursing subjects proper. This outline is by no means Utopian, yet it is probable that not over 5 percent of the training schools are at present offering anything like the amount of theoretical work.

Finally, the specific training in public health science remains to be considered. This superstructure needed to convert a nurse into a public health nurse is much the same as the training needed to make a physician into a public health physician. It requires, first, a general course or courses in public health, sanitary science, or municipal sanitation, or whatever it may be called. This should include the principles governing the spread of communicable disease; the sources and vehicles of disease; the relation of nuisances and plumbing to health; the disposal of sewage and garbage; the problems of water supply and milk supply and food supply in relation to health; the effects of dust and heat, and the regulation of atmospheric conditions; the broad fundamentals of school and tenement and factory hygiene; the principles underlying isolation, disinfection, and serum therapy in the control of communicable maladies; the relation of insects to disease; epidemiology, and the organization of state and municipal health departments. Vital statistics should receive special attention in this course. The value of the nurse's work, both to her own locality and to the general cause of public health, will be enormously enhanced by accurate record keeping and intelligent statistical analysis. Second, the public

health nurse should make a special study of social problems with due consideration of underlying causes and an analysis of existing practical agencies of relief. Third, it will be of great advantage for her to extend the knowledge of dietetics and home economics gained in the training school; and fourth, special courses in psychology and educational method will greatly increase her usefulness.

These theoretical courses should be supplemented by practical field work in ordinary visiting nursing, in school nursing, tuberculosis nursing, and infant welfare work, and, where possible, perhaps by elective field work in sanitary inspection, food inspection, housing inspection, and industrial hygiene.

Progress in the higher branches of nursing education has made encouraging strides during the past few years. There are at least eight different institutions now offering graduate courses to public health nurses in Atlanta, Boston, Boulder (Colo.), Chicago, Cleveland, New York, Philadelphia, and Santa Barbara (Cal.), besides special courses offered by the State Health Departments of Kansas and Ohio.

The Department of Nursing and Health at Teachers' College in New York, especially endowed by Mrs. Helen Hartley Jenkins, and directed by Professor Adelaide Nutting, is the strongest and most fully developed of these schools. It has a departmental faculty of five professors and instructors, with eight special lecturers attached to the staff, and offers to graduate nurses programs of study of one or two years' duration in teaching in schools of nursing, administration of schools of nursing, hospital administration, public health nursing, school nursing, and teaching and supervision in public health nursing. The courses offered in Boston by the Instructive District Nursing Association occupy either four or eight months. The public health, household economics, and educational aspects of the subject are taken up at Simmons College, and the sociological problems in the school for social workers. The Chicago course, the most recent adventure in this field, is offered by the school of civics and philanthropy, and covers a period of sixteen weeks, including class room work in the school, visits of inspection to social agencies, and field work under the supervision of local public health nursing organizations.

Such graduate schools for public health nursing are likely to develop rapidly, and to approximate more and more nearly the standard which has been set by Professor Nutting in New York. The great task of the moment seems to me to be an improvement of standards in the nurses' training school itself. The need for such improvement in the elementary training of nurses of all classes was forcibly set forth by Dr. F. P. Denny, of Boston, in the Boston *Medical and Surgical Journal* for June 18, 1903. It has been urged by Dr. Richard C. Cabot and Mrs. Hunter Robb in this country and by Dr. Oldfield in England, and the superintendents of progressive training schools are making a gallant struggle toward these ideals —in a few cases with the support of far-sighted trustees. As a rule, however, the immediate needs of the hospital, for which the training school was historically created, quite overshadow the new opportunities and responsibilities which have developed in the field of public health. For a fundamental improvement in the situation I am inclined to agree with Professor Nutting that, "in the best interests of both hospital and training school, some reconstruction of (the present) system is necessary; that much of the teaching, especially all of that fundamental work included in the preparatory course now given in the hospital, should be given outside of it in a central school, which could do for a number of hospitals what each one is now trying to do for itself; and that this central school should take on itself the direction of the education and responsibility of arranging with different hospitals for the practical training of the pupil in all the various services. In other words, that the training school should rest on a foundation not unlike the medical school."

All of us who are interested in the profession of nursing realize the debt of that profession and of the public to the hospitals which have done so much for nursing education. Yet an educational institution should be organized for educational purposes, and not as an adjunct to an institution for healing the sick. A few independent training schools, free to develop as leaders, would exert a more powerful influence on the whole progress of nursing education than perhaps any other force. I understand that a definite movement is under way for securing an endowment for the training school at Johns Hopkins. I trust that it may succeed, and that this example may be followed elsewhere, for the establishment of such schools is, in my opinion, an essential need of our future campaign of public health.

Summer Course in Corrective Nursing

The deformities that separate the child from his playmates and thus rob him of the joyful activities of childhood, and in later life limit his social efficiency, cannot fail to make a heavy appeal to those who know that a large percentage of these deformities might be partly, if not wholly, corrected.

Many nurses, especially those engaged in school work, must have felt the need of some knowledge of this subject which Miss Sweeney in her article on "Corrective Work and Its Relation to the Nurse," and which is to be published in this department next month, rightly says is rarely included in the general training.

Some will perhaps be interested in the appended announcement of the summer course to be given in the scoliosis department of the Children's Hospital, Boston, and will be able to avail themselves of this opportunity.

OUTLINE OF COURSE IN SCOLIOSIS AND FAULTY ATTITUDE

SCOLIOSIS DEPARTMENT CHILDREN'S HOSPITAL, BOSTON, JULY 3, 1916-JULY 31, 1916

Monday, Tuesday, Wednesday, and Thursday afternoons from 2 to 5. —Practical work in gymnastics—in sections. Clinical demonstrations —in sections. Taking of casts of feet and strapping. Lectures in theory and diagnosis of scoliosis and faulty attitudes. Lantern slide demonstrations of scoliosis, costume and foot deformities.

Saturday mornings, 9 to 12.—Practical work in gymnastics on clinic cases—in sections. Practical demonstration of the application of permanent and removable jackets by different methods.

In detail the course will include the following subjects.—Theory of upright position, center of gravity and its relation to balance. Antroposterior position, faulty attitudes, etiology—(1) forward shoulders. (2) round back, round hollow back, treatment and methods, records. Scoliosis. Physiological and structural. Definition. Classification. Etiology. Types. Methods of treatment—exercises, removable jackets, permanent jackets. Effects of school life. School seating. Methods of examination and recording. Feet. Etiology. Methods of examination. Flat and pronated feet—shoe deformities. Methods of treatment. Effects on posture.

Fee, $35. Course limited. Registration fee, $5. Balance payable at entrance. Application to be made to Dr. R. W. Lovett, Children's Hospital, Boston.

The erection of a tuberculosis hospital for Jefferson county, New York, has been started at Watertown. A novel feature of the building will be its unusual form. The hospital will consist of a main structure, with two wings. Instead of branching off at right angles, the wings will be set at a slant of ten degrees, the purpose being to provide the maximum amount of sunlight throughout the day.

PHILANTHROPY AND THE PUBLIC HEALTH

Conducted by THE NEW YORK ASSOCIATION FOR IMPROVING THE CONDITION OF THE POOR.
BAILEY B. BURRITT, General Director.
WILLIAM H. MATTHEWS, Director,
Department of Family Welfare.
DONALD B. ARMSTRONG, M. D., Director,
Department of Social Welfare.

Please address items of news and inquiries regarding Philanthropy and the Public Health to the New York Association for Improving the Condition of the Poor, 105 East Twenty-second street, New York City.

SCHOOL NURSES, TEACHERS, AND PARENTS

Need of Their Cooperation in Following Up Cases for Treatment

BY J. H. BERKOWITZ,

Special Investigator Bureau of Welfare of School Children, New York Association for Improving the Condition of the Poor.

NEGLECT OF PHYSICAL DEFECTS

Parents and teachers are largely at fault for the great number of children attending school handicapped by some physical defect or other, for the failure to cooperate with the school nurses in their follow-up work results in these children being allowed to struggle through school thus physically impaired.

Year after year since 1909 the school doctors in New York city have been finding that from 70 to 72 percent of the children whom they examined have physical defects, such as diseased tonsils, adenoids, defective vision, defective hearing, decayed teeth, cardiac and pulmonary diseases, etc.

During the school year 1914-1915 the number of children found having these health defects was 222,072 out of 305,665 examined. In other words, 72 percent of the children examined needed medical, surgical, or dental treatment, and only 33 percent of the enrolled 925,000 children were examined. If it is assumed that the same proportion prevails among the remaining two-thirds of children who were not examined, then there must be over 666,000 school children suffering from physical defects.

Not more than 37 percent of the children reported with defects received the necessary treatment. A large proportion of those treated owe their improved health mainly to the efforts of the school nurses in following up the cases to their homes, and persuading the parents of the necessity of having their children's health needs attended to.

PHYSICAL DEFECTS AND BACKWARDNESS

School records show that most of the retarded pupils are those handicapped by physical defects. Defective nasal breathing, diseased tonsils, and decayed teeth cause serious derangement in the general health of the child, and the physical impairment which ultimately results from the neglect to correct such conditions may lead to permanent abnormalities. Absences from school due to such "simple" ailments as toothache and sore throat (tonsilitic cases) are frequent, and cause much of the backwardness of pupils. This means valuable time lost to the children and a waste of public funds in their education.

School nurses reported last year over 45,000 "unfinished" cases—that is, cases which required medical and surgical treatment, but were not reported treated, and were not reached by the nurses for want of time to make the home calls. The parents of these children had failed to heed the notices of the school doctors advising them that their children suffered from some physical defect and that they be taken to the family physician or dentist, as the case might call for. These parents permitted their children to continue their broken attendance at school, suffering from physical ills, which are a decided impediment to their educational progress. Many children, bright at the time they enter school and showing excellent scholarship records in one or two grades, later begin to exhibit a disinclination to go to school, to do their work, and thus gradually drop in their class standing. These are the laggards whom timely medical care might have saved from suffering, anguish, and disgrace.



Fig. 1. Home visit by school nurse. Mother being advised on care of child requiring medical treatment.

THE INSUFFICIENCY OF NURSES

New York city employs 200 nurses for health work in the schools. A great part of their time is devoted to following up cases reported by the medical inspectors as requiring treatment. The staff of nurses is inadequate to the needs of the city's schools, the average number of pupils in charge of a nurse being 4,325. This is nearly three times as large a number as should properly be assigned to a nurse, considering the many duties that are imposed on her and the social conditions which add to the difficulties of the work in the more congested districts of the city.

The Committee on Medical Inspection of Schools and School Children of the American Public Health Association has recommended that a nurse have under her supervision 3,000 pupils as the maximum, "and that the number be reduced as much as possible." The report of the com-

mittee adds, "It would be better to have one nurse for each 1,500 pupils."

It is interesting to notice how several large cities compare in this respect. It will be seen from the accompanying table that the school nursing situation in American cities at the present time is very far from the ideal. These cities were not selected in any special order or to fit any plan; they merely happen to be those from which reports on this subject are available:

APPORTIONMENT OF PUPILS TO NURSES IN TEN AMERICAN CITIES

Based on reports dated variously from 1910 to 1915.

City	School enrollment	Number of nurses	Average number pupils to nurse
New York	925,000	200	4,325
Chicago	301,172	70	4,539
Boston	111,632	35	3,189
Cleveland	74,438	18	4,134
Detroit	61,799	6	10,299
Minneapolis	46,267	7	6,609
Milwaukee	41,167	4	10,292
St. Louis[1]	16,785	6	2,798
Newark, N. J.	67,568	26	2,598
San Francisco	32,219	10	3,222

[1]The system of school nursing in St. Louis includes only 19 schools in the poorer sections of the city.



Fig. 2. School nurse instructing children in the care of the teeth.

THE NURSE'S DUTIES

The nurse examines the children for contagious diseases; makes periodical examination of children ordered treated, but not excluded from school for contagious eye or skin diseases; gives instruction to children in oral hygiene, with practical demonstrations of the use of the toothbrush and tooth preparations, and in other matters of personal hygiene. She assists the medical inspector in making physical examinations, explains to the parents the nature of defects found in their children, of which they had been notified by the doctors, and advises them as to obtaining the necessary treatment. She makes home visits to ascertain whether children reported as requiring treatment are obtaining it. Where parents are unable to afford private treatment, the nurse advises them as to places where it can be obtained free. She takes children to clinics and dispensaries whenever they are unable to go alone and have no one in the family to accompany them.

In addition to her prescribed duties which she fulfills from day to day, the nurse renders assistance to the necessitous child by obtaining medicines, eyeglasses, or other requirements from charitable institutions. She meets daily opportunities which present themselves to her for the instruction of mothers in sanitation, ventilation, cleanliness, bathing, and the preparation of food, and many other incidental factors which are conducive to health.

DIFFICULTIES TO OVERCOME

Much time is necessarily lost on cases among the foreign-born population as well as among some natives, who view the authorities' interest in their children with fear and suspicion, and have strong prejudices and superstitions regarding medical, surgical, and dental treatment. These obstacles must be overcome with gentle argument, and the conviction must be impressed on the ignorant mother that what the nurse seeks to do in behalf of the child is in its best interest. It is sometimes as hard to convince a mother that a row of decaying teeth, stumps, and inflamed gums are a disfigurement to her young daughter as it is to overcome the mother's objection to eyeglasses as an impairment of a girl's "looks."

Sometimes the plea is made by parents that their employment at their trade or business will not permit them to take the child to a clinic for operation—mainly in cases of tonsils and adenoids. This is frequently a mere subterfuge to avoid having the operation performed. In these cases the nurse must offer to make all necessary arrangements for the operation and treatment, and even to accompany the child to and from the clinic. Here another struggle of wits ensues to obtain the parents' written consent, without which the work must not be done. It need hardly be said that such cases—and they are not few, by any means—consume a great part of the nurses' time.

But a large percentage of the "unfinished" cases are not in this class. On the contrary, they are those of children in better-to-do families, where intelligent mothers are merely neglectful. It is in these cases that the failure of parents to act promptly and the lack of cooperation by teachers in the follow-up work result in a social wrong.

It is important to point out that the nurses make the home calls in the afternoon after the day's work in the schools. It will thus be seen that the school nurses' time and energies in New York city are pretty well taxed.

THE NEED OF PARENT COOPERATION

Nurses must make from two to ten visits in many cases before parents are induced to secure medical attention for their children, according to the reports of the Bureau of Child Hygiene of the Health Department. The average number of visits per case made by nurses in following up is four. It can readily be seen that without the cooperation of teachers and parents, more cannot be expected of the school nurses than they are at present accomplishing. When one considers that long intervals of time must elapse between visits to individual cases while the nurse makes the rounds of her district, it becomes apparent that the health defects of some children become aggravated, with attendant diminution in their capacity for school work.

The city certainly needs more nurses. But it also needs teachers and parents who will devote more attention to the health of the children. Many more cases of physical defects could be disposed of than at present if the teachers exerted their influence on negligent parents to the end that the time of the school nurse be saved for other work. Parents would only be fulfilling their duty toward their children, as well as discharging an obligation to society, if they promptly carried out the instructions of the school doctor instead of waiting for the nurse to visit them and persuade them to do what is necessary.

THE PART OF THE TEACHER

Teachers can render very effective service by communicating either directly or through the principal with the parents whom the nurses have had no opportunity to see. A teacher has before her the physical record card of every child in her class, and no teacher should cease attention to a case until every defect entered by the school doctor has been reported treated. No home visiting is required for this. A reminder to the child or a brief note to the parent will sometimes suffice; if not, a request be made that the parent call at the school to see the principal regarding the child's work at school. Perhaps we had better make it clear to teachers and parents alike, who may not as yet be fully abreast of the times, that the child's health is as much the school's concern as is his education. Hence the teacher's obligation to prod the parent on the child's need of eyeglasses, an operation, or dental care, as well as on his failure in "readin', 'ritin', or 'rithmetic."

This is particularly important with reference to the eye cases. Nothing will perhaps hinder a child more in its class work than poor vision. Once a child has been examined by a doctor and reported to have poor eyesight, the duty should devolve on the teacher to see that the child is examined by an oculist, and, if glasses are prescribed, that they be promptly obtained and worn by the child. A teacher who has never more than fifty pupils in her charge has a better opportunity to observe them and keep track of their needs than a school nurse has with over 4,300 pupils to look after.

Until parents and teachers offer such cooperation, a great part of the money spent for school health work is wasted. The disclosing of physical defects is but the first step. The last and most important step is having the defects cured. It is here that the parent and the teacher may complete the work of medical inspection, and not only benefit the individual child, but render a valuable service to the community.

Mrs. Rebecca R. Williams, of Bellefontaine, Ohio, has just deeded to that city a tract of land valued at $100,000 on the condition that the land be sold and the proceeds used to erect and maintain a hospital. One-half of the money will be spent for a building with the necessary equipment, and the rest will constitute an endowment fund. The institution will be named "The Mary Rutan Hospital," in memory of Mrs. Williams' mother. It will be established and managed by a board of five directors, of which the mayor of Bellefontaine will be chairman.

The statement in the May number of THE MODERN HOSPITAL that the recently organized Cooperative Hospital Association of Cleveland, O., would build a $30,000 hospital contained a typographical error. The building plans of the association call for a hospital to cost $300,000. The construction work will include the remodeling of an apartment house and the erection of a five-story and basement building, 146x120 feet. Dr. Henry A. Becker is at the head of the undertaking. Associated with him are Dr. Frank J. Geib, Dr. John N. Lenker, F. O. Blazier, and William Matthews.

INTERESTING SOCIAL SERVICE MEETING

Speaker Tells Some History of Orthopedic Work Under Pioneers Half a Century Ago

At the last meeting of the social service workers of the hospitals of New York and Brooklyn Mr. Oliver H. Bartine, superintendent of the New York Society for the Relief of the Ruptured and Crippled, gave a most interesting talk on the development of orthopedic work and the care of the ruptured and crippled. He told of the first work done solely for the ruptured and crippled under the guidance of Dr. James Knight in the year 1842. After working among the crippled poor of the city for years, he determined that an institution should be founded to relieve their suffering, realizing, as he did, how very inadequate the crippled and ruptured could be cared for in their own homes or even in the hospitals of that day. In 1862 he, with the aid of a few men of prominence and means, organized the original society that has been known from that date as the New York Society for the Relief of the Ruptured and Crippled.

He gave a complete history of the hospital up to the present date. He also told how Dr. Virgil P. Gibney, the present surgeon-in-chief, was the first to introduce modern orthopedic surgery, and had as an associate the late Dr. William T. Bull, who added to the efficiency of the hernia department by operating for radical cure. The statistics of hernia operations have grown very much, and no case of deformity or hernia need ever go unrelieved.

Anyone who believes that a special hospital cares for only its specialty is vastly mistaken. Almost from the beginning this hospital has had a full staff of consultants, as well as a regular attending staff, and at present there are experts in every branch of medicine and surgery connected with the institution, so that patients have at their disposal the leading specialists of the city. He told of their manufacturing department, their school that was started when the hospital was founded, and the excellent work done by their social service department, which is now considered one of the integral and important departments of the hospital.

As chairman of the first social service department established in the Masonic order, he told of its gratifying results; he also felt that the lesser number of mendicants upon the streets of New York city during the past few years was partially due to social service and allied agencies, and to the many discussions entering into this important problem, which has tended to bring about proper activity by the proper officials.

Cost of New York's Insane

According to the annual report of the State Hospital Commission, which was recently submitted to the Legislature, the state spent $6,865,385.98 for the care of its insane. The per capita cost for maintenance was $210.89, or $0.57¾ a day. This included every item outside of buildings and permanent improvements. On October 1, 1915, there were 36,664 patients under treatment in all institutions, and of these 34,308 were cared for in the civil state hospitals, 1,351 in institutions for the criminal insane, and 1,005 in licensed private institutions. The capacity of the fourteen civil hospitals at the close of the year was 27,872, thus being overcrowded by some 6,500 patients, or 23 percent. The increase in daily population over 1914 was 698 including paroles and 559 excluding paroles. There were 7,934 admissions to the state civil hospitals during the year.

THE MODERN SANATORIUM

Conducted by ALBERT WARREN FERRIS, A.M., M.D.,
Saratoga Springs, New York.

Please address items of news and inquiries regarding The Modern Sanatorium to the editor of this department, Saratoga Springs, New York.

Orientation and Questionaire

When once arrived in the sanatorium, after yielding to the advice of his physician and becoming imbued with a growing confidence in the ultimate results of treatment, and after receiving (let us hope) proper first impressions, the patient either feels a sense of relief at having taken the first step, and a growing receptiveness, or is overwhelmed with a sense of expatriation, possible permanent impairment, and general distrust.

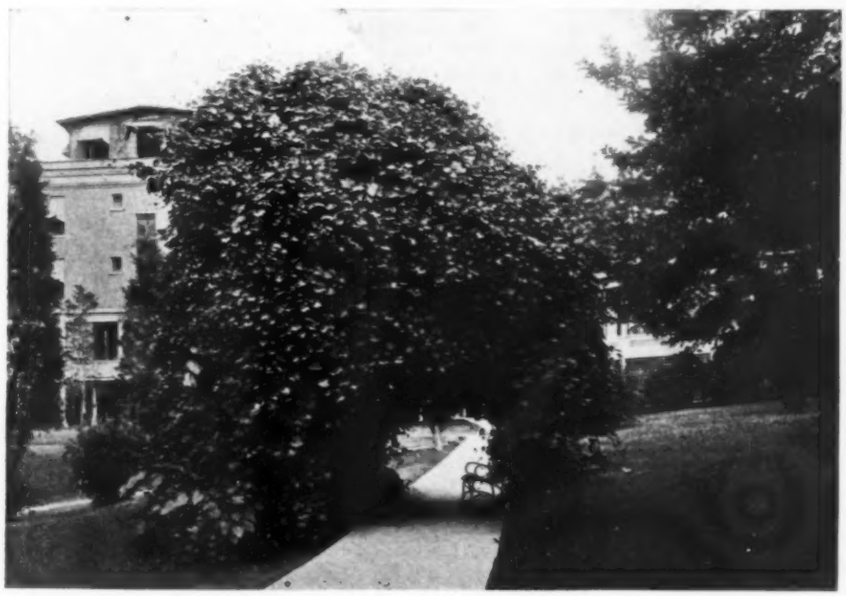


Fig. 1. The Old Grape Vine, Glen Springs.

The assignment of the patient to his room should not be left to a clerk or an employee who has none but practical and impersonal ideas. The feeling of being stowed away even as so much baggage is not encouraging. The best psychologist on the medical staff should, without haste, with an absence of the hustle and bustle of modern approved mercantile methods, make a rapid survey of the new member of the family, his impressionability, his nervous edge, his irritability, perhaps his despondency. An apartment should be chosen with a proper outlook; for, although he will of course be led—urged, if need be—into as much of an out-of-door existence as possible, nevertheless there are many hours when the seclusion and isolation of one's bedroom are unavoidable. Hence the psychologist chooses a room from whose windows can be seen the activities of a farm yard; or the life and enjoyment of golf links; or the cool shadows of a grove; or a roadway over which forge numbers of monster automobiles, typical of irresistible power; or trim and peaceful lawns and flower beds, suggestive of repose.

Some patients will enjoy daily a study of a single feature, like the old, luxuriant grapevine which arches, like an ancient gateway, over the walk, north of the principal building at The Glen Springs at Watkins, where so frequently a pro-German cat can be seen stalking an English sparrow, who has dreamily settled on a sturdy tendril, oblivious of feline periscopes. Or, at The Glen Springs, a patient may be domiciled so that he has a wide and comprehensive view of near and distant objects, so varied that either grapevine, apple trees, cottages, pedestrians, or miles of blue lake may engage his attention and furnish suitable food for thought. Or, as at Clifton Springs, he may be so situated as to direct his gaze on symmetrical rows of maples, shading walks which lead to a bright expanse of meadow, palpitating with light.

His temporary habitat having been selected for him, and his orientation established, a consideration of his case should begin at once. A delay of half a day or a day is irksome, and suggests neglect as well as loss of time. Hence the preliminary questions should at once be propounded, and a full clinical record be elicited, covering family history, the patient's past history, his general habits as to exercise and food, stimulants, and medicines, activities of digestive and urinary tracts, and as to sleep, as well as the subjective symptoms of which he complains. This must precede the



Fig. 2. View from a north window at Glen Springs.

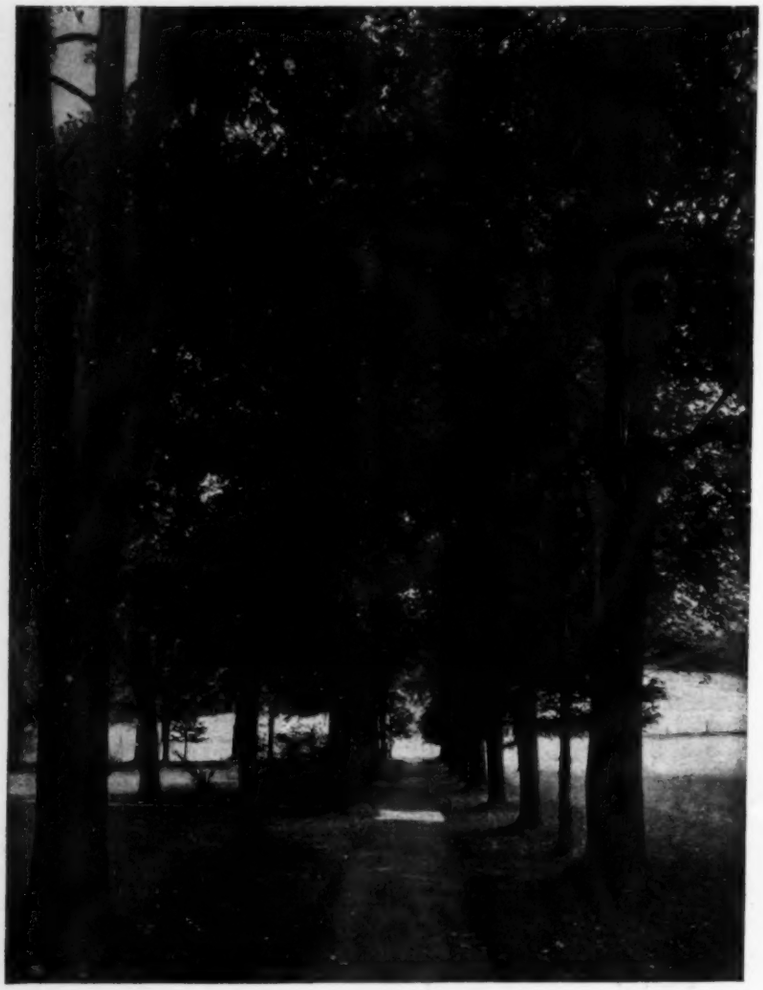


Fig. 3. Maples from a window at Clifton Springs.

physical examination, and be somewhat of a guide to special focal attention. The patient will state his full name, home address, name and address of a relative, and name and address of his home physician readily enough. He will give you his age, civil condition, race, and occupation, and will unhesitatingly tell you the chief complaint which brings him to see you and seek your care. But when you begin to inquire concerning his immediate family and his ancestors, he will frequently demur and somewhat resentfully claim that you are to treat him, and not his dead progenitors; and there will be a necessary explanation of ancestral tendencies and proclivities, and inheritances in general; hence the age of father, mother, brothers, and sisters, and paternal and maternal grandparents must be recorded, together with the state of health if living, or cause of death if deceased, and also age at death.

In the past history should be recorded the occurrence or nonoccurrence of the ordinary exanthemata of childhood, including measles, rötheln, hives, erythema, chickenpox, and especially scarlet fever. The history of an attack of diphtheria, chorea, tonsilitis, rheumatism, or rachitis should be elicited or denied. The same is true regarding typhoid fever, pneumonia, malaria, influenza, gonorrhea, and syphilis. Women are asked eight more questions than men, to secure the facts regarding menstruation, labors, and miscarriages, if any. Injuries and operations must each be listed, with their extent, gravity, and dates. Next are chronicled the personal habits, including brief statements regarding exercise, appetite, food, coffee, tea, milk, water (how much per day), alcoholics, tobacco, and drugs, as well as a statement regarding constipation, the use of laxatives, and the presence of hemorrhoids, with an enumeration of the occasions per day and per night on which renal secretion is voided, as well as its urgency; finally, the sleep record, how many hours, and whether restful or troubled with dreams.

The final group of facts elicited includes present or recent subjective symptoms, as follows: headache, tinnitus, vertigo, ocular symptoms, mouth symptoms, thoracic pain, cough, expectoration, dyspnea, palpitation, nausea, vomiting, abdominal pain, gas, joint symptoms, edema.

Four-page folding sheets, printed in blank, for recording the biographical and clinical facts thus outlined, should be provided for expediting work. They can conveniently be placed in large envelopes, in which correspondence and examination reports can readily be inserted, for preservation and easy access in a vertical file.

A general chronological history centering on the chief complaint is compiled from the patient's statements in answer to questions, to be studied in connection with the clinical record, as a very desirable, if not necessary, supplement.

A very early order of the physician concerns the preservation of a twenty-four-hour specimen of urine, collected as soon after admission as it can be secured, and before change of diet. Exact directions for collecting the specimen should be printed on the large label of the container, in order to secure an exact day and night total specimen.

The weight should be taken soon after admission at a recorded time of day, the patient nude or wearing a one-pound sheet. Next comes the physical examination.

ALBERT WARREN FERRIS.

Toledo, O., is to have a hospital for blind infants if the plans of the Baby Welfare Association of that city are carried out. Mrs. R. J. Law is at the head of a committee appointed to take the matter up with various societies represented in the association membership, and Aaron Cohn is publicity chairman of the movement, the object of which is to provide proper care and treatment for infants afflicted with blindness at birth. Speaking in support of the hospital project, Miss Emma Roberts, of the District Nursing Association, recently pointed out that the sight of an infant may be saved in forty-eight hours' time and at a cost of $1.50, whereas the cost of educating a blind person is $8,000.

Plans for the proposed new home for the Amboy Hospital, Amboy, Ill., call for a two-story and basement building, 33x64, of tile and brick veneer construction. The dining room, kitchen, and laundry will be in the basement. On the first floor, near the front entrance, will be the physicians' office and consultation room, matron's room, and reception hall. Back of these will be nurses' rooms, a ward room, and private rooms for patients. The operating room will be on the second floor, which will also have a ward room and private rooms, with a similar arrangement to those on the first floor. Seventeen to twenty beds for patients will be provided. The hospital is being erected by the Amboy Hospital Company, which took over the institution when the old building was burned last year.

DEPARTMENT OF DIETETICS

Conducted by MISS LULU GRAVES,
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Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, Ohio.

Wheat Flour

[Continued from May issue.]

BY J. A. WESENER, M. D., Chicago, Ill.

GLUTEN

This is the most valuable constituent of the flour—not so much in that it is a nitrogenous substance, which furnishes assimilable nitrogen to the body, but on account of its peculiar physical property, which adapts it to the art of breadmaking. Everyone knows from his first lessons in physiological chemistry that gluten is known as a coagulable protein, which exhibits its coagulable properties when it comes in contact with water. Wheat and a few of its closely related grains, such as speltz and emmer, are the only materials which contain proteins of this kind. While there are other proteins in wheat flour, notably albumen and globulin, which do not coagulate with water, these are comparatively small in amount and relatively unimportant. The proportion of total proteins in the flour is nearly always somewhat less than in the entire wheat grain, and for this reason there is a somewhat higher proportion of protein in the bran and other byproducts, which ordinarily are used as food for animals, than in the flour. So, too, that portion of flour material which lies farthest from the bran contains the greater amount of starch and a less proportion of gluten than does that which lies near the bran. The whiter, finer grades of flour contain, therefore, more of the starch and less of the protein than do the coarser, darker grades.

I wish to emphasize the point made above that the most important property of the wheat gluten is the fact that it makes the framework of the loaf of bread. If other cereal proteids had this same property, leaven bread would be made out of all such cereals. Therefore, if corn, rice, buckwheat, and rye flours had gluten which was of the same physical property, the consumer would have a host of cereals from which to make bread.

The food value of wheat gluten, from a nitrogenous metabolism standpoint, is no better than what can be obtained from the other known coagulable cereal proteids. In this connection, if one seeks to produce a bread highest in nitrogenous elements, he would be obliged to use the lower grades of flour or add higher protein substances to the flour before turning it into bread. Of course, it must be borne in mind, everything else remaining equal in the manufacture of flour, that the ratio of color value in a flour decreases inversely with the increased protein matter. As already stated, the bran, which is the outer portion of the wheat kernel, is the richest in protein substance, but these proteids are not of a gluten nature, and therefore do not coagulate with water. As an article of food, they are inferior to the proteids of the flour because they are incased in woody fiber, from which they are not removed in the alimentary tract, and therefore, to a large extent, are lost to the body.

GLUTEN OF FLOUR.—This is a very important factor from a baking standpoint. Just because a flour should happen to be high in gluten content is no proof that it will make a large loaf of bread. We have seen many types of flour that were high in gluten which was very soft and stringy, and therefore did not have enough resisting properties to hold the entangled gas developed by the yeast. Many times we have seen flours where a 10 percent gluten content made a larger loaf of bread than could be made from a flour running 12 percent in gluten. A simple illustration would be like comparing two equal weights of vulcanized rubber, one stretching considerably more than the other before breaking. During the present season much of the wheat has been affected by germinating during and immediately after harvest, which has resulted in so changing the gluten as to destroy the properties which it ordinarily possesses when the wheat is properly ripened without germination. This condition often results in a doughy bread, and, unless proper care is used in making the loaf, it has a tendency to fall in the oven and lose considerable of its volume.[1] On the other hand, we have seen flours that are not only high in gluten, but in which case the gluten was of a very tough and harsh nature. When such flours were subjected to the ordinary bread methods, a poor loaf was obtained. Had the flour been treated in keeping with the quality of the gluten, a large and very satisfactory loaf of bread would have been produced. Such flours require more water and a slight increase in the period of fermentation, or a slight increase in the amount of yeast. The two factors involved are water and a longer enzymic action of the yeast on the gluten. These two elements will soften the gluten so as to prepare it for the maximum expansion under the influence of the gas produced in the dough.

[To be continued.]

Practical Dietetics

BY H. D'ARCY POWER, M. D.,
Dean San Francisco Polyclinic and Post-Graduate School, San Francisco.

In accepting the proposal of THE MODERN HOSPITAL to write a paper on practical dietetics, I realized that I was undertaking what might easily be either a hopeless or futile task. The subject is so much larger than can be adequately covered by a single essay, and generalities are so apt to fail of individual application, that a successful attempt seems quite problematical. Nevertheless, I am about to offer a few suggestions along the line of the general principles involved that are often overlooked, and a restatement of which may be at least serviceable to some of my colleagues.

Practical dietetics may be considered under three headings—qualitative, quantitative, and environmental. What should we eat, how much should we eat, and under what conditions should we eat? Let us consider these seriatim. First, in regard to the quality of food, it ought to be recognized that, in the very nature of things, there is no fundamental reason why any form of organic matter should be absolutely excluded from consideration as a food source. If we look at the digestive activities of the animal world, we shall find that, while the cells and tissues of ani-

[1] In a later article we will give a method of how to produce an excellent loaf of bread.

mals different from ourselves are often histologically identical and physiologically indistinguishable, they are able nevertheless to deal with substances as food that never enter into our scheme of diet. When we consider the daily dietary of a barnyard fowl or a pig, we see that neither coarseness of structure, hardness of texture, presence or absence of bacteria have any necessary effect on a good digestion. Even when we deal with substances that are toxic to man, we find that other creatures are able to utilize them with impunity. The rabbit can make a dinner of belladonna leaves, and there are beetles that can grow fat on strychnine; even man himself, under conditions established by climate and habit, is able to live healthily on dietaries that are quite outside the range of our daily habits. The Eskimo is, as far as I am aware, not particularly the sufferer from living largely on whale blubber, nor have we any special reason to think that the dwellers in tropical climates, living on very coarse forms of vegetable character, are more subject to digestive difficulties than ourselves. We ought, therefore, to look on no form of organic matter as necessarily excluded from consideration as a foodstuff, and a general consideration of the whole subject from the physiological standpoint seems to indicate that failures in digestion are more frequently the result of failure in the secretion of the digestive fluids than in the inherent indigestibility of the substances used. This is a very important consideration, if true, because it condemns as unscientific any fixed formulation of foods as included in or excluded from general use, and it removes the onus for digestive failures to the patient and the physician in the nonadaptation of the organism to the work to be done. That this is so in actual practice is abundantly shown by Pavlow in his experimental work, wherein he demonstrated that changes in dietary were always followed later, in healthy individuals, by a change in digestive secretions, bringing them into relation with the altered conditions; thus, dogs fed largely on carbohydrates and then transferred to a purely proteid diet, soon produced the necessary proteolytic ferments; or, under reversed conditions, an increase of amylopsin with a decrease of trypsin. We will, therefore, take as our first problem that of determining the nature of food to be given. We shall first consider the habits of the individual and the possibility of bringing him into relation to his food rather than bringing the food into relation to him. This is often of great importance to us in a country such as the United States, with people coming from many parts of the world and having very different food habits. It is no uncommon experience to find that an ideal dietary based on our experience with Anglo-Saxons and given to a Mexican or southern Italian hopelessly fails, owing to the different habits and digestive possibilities that their past has engendered. It is the belief of the writer that, if time and care be used, a relatively normal organism may adapt itself to a very large range of foods, including therein many that have a bad reputation, and which, at a given period of their history, might be quite unusable. It is within the writer's experience that certain vegetables, such as onions and the cabbage family, which, in particular individuals invariably produce gastrointestinal distress, can, by adaptation, later be used and enjoyed without harm. It is not so clear that in those already afflicted with disease any such adaptation is possible, or the effort desirable.

We will now leave the subject of the nature of food, and turn to a few of the conditions under which food is eaten. Experience of hospitals, sanatoriums, and the recommendations of physicians to their patients in private practice leads to the suspicion that one of the causes of digestive failure is an insufficient regard to the need of accompanying the ingestion of food with a proper appetite. It is no uncommon thing to offer the sick articles of diet that, however digestible and nutrient in themselves, are absolutely incapable of arousing any desire on the part of the patient to ingest them. An individual who, for most of his days, has lived on the products of French, Italian, or Spanish cooking, and is then offered milk soup, wishy-washy rice pudding, and vegetables without salt or seasoning, is not likely to have that avid desire which should accompany all intaking of food, because we have sufficient proof that the first secretion of the gastric juice, and in fact even the production of the sufficiency of saliva, is dependent on an active psychic impression. If these necessary secretions, the saliva and the so-called appetite juice, be not produced, the secondary stages of digestion will almost certainly fail in proper development. The man who hopes to succeed in gastrointestinal alimentation will carefully inquire into the likes and dislikes of his patient, and in setting out his dietary give due attention to this very important factor.

Taking next in order the question of mastication, it is hardly necessary to restate what is an every-day experience—constant failure of digestion in the United States, and to a lesser extent elsewhere, from insufficient mastication. It is not, perhaps, so entirely because the food needs minute trituration, as that in the mixed dietary of man each of the food elements requires a proper adjustment of the secretions, and that in the case of starchy foods the need of insalivation, which can only occur with careful mastication, is an all important step, and that also a proper interpenetration of meat fiber, toughened and hardened as it is by some of our commonest methods of cooking, no less requires disintegration before it can be made accessible to the hydrochloric acid and pepsin of the stomach. We might also consider from this standpoint another reason why mastication should be thoroughly performed—namely, to permit of the proper segregation of the food in the stomach. It will be recollected that Cannon, in his experiments with cats, demonstrated that food taken into the stomach is not indefinitely mixed with gastric secretions, but is deposited layer upon layer and submitted through the influence of movement to digestion in small masses in the antral end. A rapid ingestion of food mixed with large quantities of fluid very readily makes this impossible, and gives the condition which we so frequently see in the x-ray plate where the bismuth meal, taken at one gulp, shows nothing of this arrangement; yet it is on the occurrence of some such segregation that the continued digestion of starch in the stomach is dependent. We might at this point consider, in cases where digestion is already injured or proper mastication is impossible, to what extent the lack of these elements can be compensated. I would draw your attention to the utility of acids and alkalis in the process of cooking, the first leading to disintegration of connective tissue and the second to the breaking down of cellulose. If we consider the use in German cooking of acids, we may find therein an explanation of the ability of the Teutonic stomach to deal with foods that would very commonly lead to disease if otherwise cooked. It is a fact that in past times a great deal of the meat used in central Europe was of poor quality, tough, and of inferior flavor. The type of cooking which by the addition of spices gave the necessary appetite juice, and by the use of acids led to better solution of the fibrous coverings of the digestible proteins of such meat, has a physiological explanation and gives us a hint for practical use in modern dietaries. So also the very common use in some parts of Europe of small quantities

of sodium bicarbonate or carbonate in the water wherein vegetables are boiled has a very distinct value in rendering the starch contained in these foods more readily accessible to the ptyalin and amylopsin of the salivary glands and pancreas. If, then, we have succeeded in evoking a good appetite, of prolonging the mastication of food to allow of insalivation and segregation, and have so prepared our foods that, in the case of subnormal digestion, they are sufficiently amenable to the gastrointestinal secretions, there still remains the problem of carrying them through the parts of the intestine devoted to absorption and assimilation in a reasonable time. In other words, we must face the common condition of so-called intestinal stasis and secondary autointoxication. It is a somewhat prevalent belief among medical men, and almost universal among the laity, that the symptoms of autointoxication are due to absorption of food-engendered poisons in the large intestine. It is the contention of the writer that this is more than doubtful. Cases are not at all uncommon of patients evacuating their bowels once a week and having no toxic symptoms. A man died some years ago, whose case was reported in the *Journal of the American Medical Association*, who passed through two periods, one of some ten months and the second of nearly a year, without an evacuation of the bowel. At the end of the second period he died with an accumulation of some forty pounds of feces in the colon, and it is not recorded that he suffered throughout this period with any intense intoxication. When we compare the results of twist of the ilium with the twist of the sigmoid, we find that the first is followed by immediate symptoms of poisoning and the latter none for possibly many days. Why? Because, in my opinion, all gastrointestinal intoxication is dependent on the absorption of poisons from the mucosa of the small intestine, and not in any way from that of the large. So long as the food can traverse the small intestine in the usual period—namely, about three hours—and pass without secondary regurgitation into the colon, autointoxication never occurs. The ill effects of the colonic stasis I believe to be due solely to the secondary obstruction that they cause to the proper emptying of the ilium, and therefore I believe that the man dealing practically with such cases will see to it, not so much that the colon is constantly empty as that the passage through the ilium is effectively secured. What does this mean in the matter of dietetics? It means that the food in such cases should be of such a character as to afford the least chance for retention in the long journey through the small bowel. But food consisting largely of stringy cellulose, such as many of the tuberous vegetables—carrots, turnips, kale—should be excluded on account of their mechanical possibilities; that in the use of aperients or laxatives the small bowel rather than the large bowel should be considered, and that drugs, such as phenolphthalein and senna, are more useful than aloin or other colonic stimulants. It is within the writer's experience that in cases where marked toxic symptoms, headache, etc., were present, the administration of a small intestine stimulant relieved these long before an actual evacuation occurred, the belief being that, as soon as the peccant material passed the ileocecal valve, the toxic absorption ceased. The whole subject is worthy of more careful study than has so far been given it, but we shall not be doing wrongly, whatever may be the final outcome, in following the line here suggested of cutting out mechanical obstruction and stimulating peristalsis.

We shall now pass to the subject of quantitative feeding. We are at the present time in a period of changing standards. A little while ago the books on dietetics were ringing with the call for a careful consideration of the calorie values of foods and the prescribing of dietaries on the basis of the supposed heat requirements of the patient. At that time it seemed to be enough to determine what the patient needed in the way of fuel, and then, so long as that fuel contained the minimum quantity of nitrogen, to prescribe it on its heat-producing basis alone. But a number of doubts have crept in; first of all, what is the minimum calorie requirement? Lusk, Johansson, Tigerstedt, all agree in placing the lowest possible calorie intake, under conditions of complete rest in bed, at somewhere about two thousand calories for a person of normal stature and weight. It would, therefore, appear as if anyone engaged in ordinary work taking a lesser amount than this must inevitably waste. Now, whatever may be the case in men of normal health and habit placed under experimental conditions, and these have been the usual data on which calorie demands have been formulated, it certainly is not true of abnormal people accustomed to a different basis of living. I have been long convinced that there are many people doing a fair, if not a full, amount of work whose heat expenditure, and therefore calorie requirements, do not come up to this standard. I believe that careful inquiry into the actual food intake of many patients leading lives of low activity will show that they are frequently not losing weight on a basis of at least 20 percent lower than this, and I suggest to the readers that they make this the subject of personal investigation and report, as I am much more inclined to trust the sum of a number of investigations over all kinds of people than the findings of a few laboratory investigations, however carefully conducted. Again, the work done in many fields during the last ten, and especially five, years shows that, even when calorie requirements are fully met, the material offered to the body as food, even though it comply with the nitrogen demands as well as those of carbon and hydrogen, does not necessarily give us the full quota of food material. Not only is there a difference in the absorption of the products of fat and carbohydrate digestion, but still more so with the proteins. So long as it was believed that protein foods, on peptonization, became immediately available for cell food, and that in the same unknown way the cell received these animal proteins and chemically changed them into those of the human economy, it was possible to believe that the task of dieting was sufficiently fulfilled by giving the minimum protein requirement. True it is, that this was by no means settled, Chittenden and his school believing that 50 grams or thereabout was a possible normal minimum, and the older observers on the common habits of mankind placed the protein demands at from 100 to 120 grams per diem. Today we not only consider the quantity of nitrogenous material, but also its nature. We know that the dissolution of the protein in the gastrointestinal tract breaks it up into small molecules, the so-called building stones of the larger protein complexes; and that, as each animal or vegetable requires for its substratum a definite form of protein matter, so it is necessary that the building stones —that is, amino acids capable of being formed into these substances—should exist in sufficient quantity in the food. The practical importance of this is to make it evident that the attempt to feed, even with a full quantity, with one particular nitrogenous substance may readily lead to starvation if it be lacking in the particular building stones necessary to form human proteins. As a problem of practical dietetics, we at the present time, not yet knowing the exact molecular contents of each given food protein, nor indeed the exact amino acids needful for the total use of the body, can make proper provision only by insisting on a sufficient variety of protein foods in the assurance

that among them the total requirements will be met. This doubtless leads to much waste, which a better knowledge may in course of time eliminate, but it is the only road which we can safely travel at present.

There are three common conditions which we have to meet in quantitative dieting—that of the normal individual who wishes to remain normal, and here a dietary based on the average experience, the particulars of which I will give later, should suffice; secondly, the requirements of those who habitually carry a weight too great or too little for their stature—the undernourished and the obese. It is a common experience that fat, or the lack thereof, is not particularly related to the food habits of the individual. Extremely thin people are often great eaters. A lady weighing 250 pounds may often eat very much less than the one with a weight of 100. It is obviously not a question of feeding or starving, but rather of what is done with the food that is taken into the body. The ultimate end of all intake is either storage or oxidation, and storage itself is dependent on whether oxidation does or does not take place. If this be so, the problem really becomes one of why do certain individuals enjoy an excessive and others a subnormal oxidation. As this is a particularly common and important phase of our daily practice, it will be well to look carefully into it. The proteins, carbohydrates, and fats stand in very different relations to oxidation, and in the daily course of assimilation and excretion differ in the order of their treatment. Proteins, for example, are almost incapable of storage. Only when the body, under stimulation, is developing new cellular areas, and particularly muscle cells, is there a real storage of protein. At all other times the daily intake, whether it be small or large, must be promptly oxidized under pain of causing intoxication, in which case it is equally rejected from the body, for a surplusage of meat unoxidized is likely to produce either vomiting or diarrhea, but not storage. If, therefore, protein is given in excess along with carbohydrates and fats, it will make the first claim on the oxidation powers, relegating the others to a secondary place. Carbohydrates have the next choice; but, if they be in excess or are deprived of their proper share of oxygen by excess of protein, they may either be stored to a limited extent as glycogen or be transformed into and stored as fats. Lastly, fat is the most refractory of all the foods to oxidize, and in some people, even when the daily intake of food is below that usually necessary to maintain health, the oxidation of the fats will fail and the fat be stored. This order of preference is extremely important in practice, because it teaches us that, if we would insure a minimum condition of storage, we must use a minimum quantity of fats and the maximum amount of protein as the basis of our dietary. It will next be pertinent to ask by what means is this oxidation brought about, and the general answer of physiologists today is that the final transformation of foods into their end products is dependent on the intermediate action of ferments, known as oxidases; and that, so far as the great mass of this final oxidation is concerned, the cells where this chiefly occurs are those devoted to heat production—namely, the muscle cells. Whether the muscle cells themselves are responsible for these oxidases or whether they play a secondary role under the influence of substances, such as those of the thyroid and other glands, has yet to be definitely shown; but this much is certain—no effective oxidation can occur unless both the thyroid gland be active and the muscle cells sufficiently numerous to deal with the products of digestion that are constantly distributed throughout the body. All this is physiological commonplace, and I would not introduce it here but that I feel that the influence and importance of the musculature as a regulator of weight is not appreciated in the way it should be. Obviously, if the greater part of the heat production which is finally dependent on how much matter is burned occur predominantly in muscles, it can only so occur provided there be a sufficient musculature to effect it; and, therefore, if an individual eat to an abnormal extent and have not a musculature sufficiently extensive to burn the products of his digestion, he must inevitably accumulate the excess. Equally, one with a large musculature, even if he eat abnormally, is likely to make away with his excess without danger of storage. Now, there is here to be remembered a third factor—namely, that muscle cells cannot be maintained in health or stimulated to grow by the mere presentation of food; that, without the stimulus of muscular exercise, muscles will inevitably diminish both in functional and reproductive activity, and the tendency to oxidative failure and fat accumulation inevitably ensue. It is well to remember in this connection the experimental work of Zumpf, who showed that the metabolism of a fasting man was increased by 250 percent on the days that he exercised. To bring these theoretical considerations into relation with the too common problems of our daily practice—how to diminish the weight of A and increase the weight of B—we would say that, in the matter of weight reduction, the first problem is to give as little as possible of nonoxidizing foods, to make the main food substance protein, with a certain amount of carbohydrate, and as near as possible a complete exclusion of fat; to remember that, if food is given in lesser quantity than it is consumed, there must of necessity be a reduction of weight, seeing that oxidation never ceases in the living body and that experimental work in various fields has shown that we may safely make the body take one-third of its daily calorie requirements from its own resources; and, thirdly, that quite as important as controlling the nature and quantity of food is the attempt to better the oxidative processes, and that, while these may be stimulated in many cases by the administration of thyroid, yet a much more satisfactory way is the growth and activity of muscle substance, and that a system of dietetics for the obese will not give permanent results unless it is based on exercises as well as food limitation. The ideal method of dealing with obesity is to give a subject subnormal diet, with abundant muscular work in a cold atmosphere, always remembering that loss of water that is not accompanied by physical work is quite valueless, as such loss is not the product of metabolism. It is well, however, to caution here the average patient that exercise without following the food restriction is equally useless.

If these be the principles underlying the treatment of obesity, it would appear as if the reverse measures would necessarily be demanded in dealing with the undernourished. I think that the experience with most of us who have dealt with this class of cases is that it is much more difficult to compel a patient to put on flesh than it is to reduce. It is an absurdity to say that a patient cannot be reduced in weight; it is too often an impossibility to insure an increase, the reason being that we have no definite control over the production of the oxidases that are the final arbiters in this matter; but inaction will lead to muscular failure, and the ingestion of the difficultly oxidized fats will make for at least an increase in weight. In parts of northern Africa, where beauty is weighed, the bride, to make sure of the affections of the future husband, whom she does not see before marriage, is treated on this basis. She is kept in bed for three months on an excess dietary consisting in greater part of oil and honey. The

procedure is certainly scientific, and is said to be very successful. It may not be capable of exact application to the conditions of American life, but it bears within itself the principles on which our treatment of the undernourished should rest.

Finally, in the matter of quantitative dieting comes the very practical question how we are to bring it within the limitations of the average home. Within the last few years a number of attempts have been made to prescribe food quantitatively, in some such simple manner as can be applied to the average household as well as to the large institutions.

I need not go into details in regard to these methods —they have been given elsewhere; but I will refer again to my publication of the plan followed by myself since 1908, which was first given to the profession in a paper read before the State Medical Society of California in October, 1910 (California State Journal of Medicine, December, 1910). I have used this now for something like nine years with perfect satisfaction, rarely failing to have it fully understood and easily carried out by patients of often less than average intelligence. It is dependent on first determining the calorie requirements of the individual on the basis of his height. The average patient may be very much too fat or very much too lean, in which case, if his calorie requirements be fixed by his weight, he will be either over- or underfed. The heat loss of the body is really determined by skin area, and the skin area corresponds to the height of a patient much more closely than it corresponds to weight. This led me to seek a formula which should easily and with reasonable accuracy give the calorie requirements on a statuary basis. I will not here repeat the grounds for my determination, but will simply state that if 2,000 calories be allowed for a height of 5 feet and 100 calories be allowed for every inch over this measurement, or 40 calories be deducted for every inch under it, we shall have a rapid and quite workable basis for determining the calorie requirements per diem. If the patient is in bed, 25 percent is deducted from the total quantity; if he be engaged at very severe work, 25 percent is added thereto. This formula is reasonably accurate for all ages from 1 year upward. Having thus the calorie requirements of the individual, we next determine the actual food to be used in the course of the day on a basis of the average value of the usual helping of foods having nutritive values. It is rather a curious fact that, within reasonable limits, the amounts of different kinds of foods taken by people or served in restaurants and families give as their calorie value a fairly common approximation, which may be taken as about 160 calories. For example, two pats of butter, or two slices of bread, or a couple of eggs, or a full plate of tapioca pudding, or a helping of stewed apricots with sugar, or a couple of rashers of bacon, or a large glass of milk, will all come within a few calories of this figure, and where, as in some cases, they fall quite a little below it, some other article, such as the usual helping of meat at the meal, will figure above to an extent that will make a dietary containing the usual foods even up; so that if we wish to prescribe for John Doe, whose height is 5 feet 7, we know at once that his calorie requirements will be 2,700 calories; and this, divided by 160, will give seventeen food helpings a day. These can be distributed according to the desires of the patient or his physician. This has given excellent results in practice, and is employed not only by myself, but by very many of my colleagues.

The following card of directions is in use in my own practice and at the San Francisco Polyclinic Medical Service with satisfactory results:

QUANTITATIVE DIET CHART

Cooked food	Calorie value Per ounce	per average meal portion	
Olive oil	200	½ oz.	100
Butter	200	¾ oz.	150
Bacon / Ham	150	1 oz.	150
Sugar	120	1 oz.	120
Crackers	110	2 oz.	220
Cake	110	2 oz.	220
Cheese	110	1 oz.	120
Meats	90	3 oz.	270
Toast	90	2 oz.	180
Dates or figs	90	1 oz.	90
Bread	80	2 oz.	160
Eggs	80	2 oz.	160
Stewed dried fruit	80	2 oz.	160
Sardines	80	2 oz.	160
Pies and puddings	50	4 oz.	200
Poultry and game	50	4 oz.	200
Cream	50	1 oz.	50
Potatoes	30	1 large	120
Beans	30	2 oz.	60
Rice	30	4 oz.	120
Green peas	30	4 oz.	120
Hominy, macaroni, noodles	30	4 oz.	120
White fish and shell fish	25	4 oz.	100
Milk or cocoa	20	8 oz.	160

Note the average ounce value is 80 calories.

Note the average portion value is 160 calories.

Plain soups, green vegetables, and fresh fruits have flavoring and chemical properties, but so little nutritive value that their presence in a dietary need not be considered.

DIRECTIONS

Ascertain the patient's height. For 5 feet allow 2,000 and 100 for every inch over. If below 5 feet, deduct 40 for each inch short; the result is the calorie requirement for twenty-four hours' ordinary work. If the patient is confined to bed, deduct 25 percent; if engaged in hard work, add 25 percent.

To prescribe the proper amount of food divide the required number of calories by 160; the quotient is the number of meal portions (i. e., is the average quantity of each article of food as usually served at a meal) which must be chosen from the accompanying table.

Example—A. M.; height, 5 feet 6 inches = 2,600 calories per day.

$\frac{2600}{160}$ = 16 meal portions a day, which may be divided between:

Breakfast		Dinner		Supper	
Ham	160	Meat	270	Eggs	160
Bread	160	Peas	120	Toast	160
Butter	150	Potatoes	120	Butter	150
Stewed fruit	160	Butter	150	Stewed fruit	160
Cocoa	160	Bread	160	Milk	160
	790	Pudding	200		790
			1020		= 2600

DIRECTIONS FOR DIET

Eat slowly, and never swallow coarse food until it is chewed soft. Never swallow much without masticating it and mixing it with the saliva. Avoid very hot and very cold drinks. Do not do heavy exercise after eating.

YOU MAY EAT

Bread one day old—toast.
Crackers, zwieback.
Dry breakfast foods.
Soft-boiled, poached or scrambled eggs—omeletted (plain).
Macaroni, spaghetti, or other Italian pastes, with tomatoes or a little grated cheese.
Boiled rice.
Plain soups.
Most white fish.
Plain roast or boiled beef, mutton, veal, chicken, turkey, game (no stuffing).
Asparagus, spinach, summer squash, string beans, green peas, boiled celery, kale.
Stewed peaches, plums, apricots, apples, pears, blackberries if seedless.
Milk puddings, tapioca, rice, bread, cornstarch, jellies, custard.
Cocoa, weak black tea, aerated waters.

DOUBTFUL—NOT MUCH AT ONE TIME

Mushes.
Sweet cakes.
Fried eggs.
Ham, bacon. If taken, they are better broiled to a crisp.
Sardines.
Herrings.
Oysters.
Pork, duck.
Cheese.
Tomatoes, beets, potatoes, carrots, parsnips, egg and oyster plants, mushrooms.
Strawberries, raspberries, pineapple, bananas.
Dumplings.
Nuts, never unless carefully masticated.

YOU MUST NOT EAT

Hot cakes, pancakes, muffins.	Onions, cabbage, turnips, cauliflower, beans, corn.
Fruit cake.	Salads.
Hard boiled eggs.	Oranges, lemons.
Rich soups, chowder.	Melons.
Salmon, lobster, crabs, shrimps, smoked and salted fish.	Pastry made of puff paste.
Hashes, sausage.	Christmas pudding.
Fried and recooked meats.	Mince pie.
Corn beef or other cured meats.	Coffee, strong tea.
	Tobacco.

We have dealt with qualitative and quantitative factors, and there remains but a word for me to say in regard to what I believe is also important—namely, environmental. Much has been brought out in the course of recent years in regard to the control of the digestive apparatus through the nervous system—not, perhaps, its normal function, in which nerve action is quite secondary to harmonic control, but to abnormal conditions whereby various glandular secretions, directly or indirectly concerned in digestion, may be inhibited or augmented, and also whereby muscular spasm in various parts in the gastrointestinal tract may be induced, or, in extreme cases, normal tonus lowered. Some of these are matters of daily experience—the fact that a quarrel at the dinner table may lead to arrested digestion, that pleasant or unpleasant news affect the appetite, are all familiar enough as incidents. But the application of the underlying principle through the regulation of the daily habits of our patients is not always given sufficient attention. Why is it that in the United States, with a dietary that, in many instances, is superior in quality to that generally used on the continent of Europe, we have such an excessive amount of digestive disturbance? How is it that the Frenchman and the Italian can sit down to a dinner that, if indulged in by the average American, will frequently be followed by acute dyspepsia, and this, year in and year out. Is it not to a great extent in the eating habits of the nations, in which the chief meal of the day—in France, for example, the evening meal—is not a mere task to be hurried through for the purpose of assuaging a physical need, but is accompanied by social fellowship, relaxation from the cares of the day, and general pleasant surroundings, in which the time element, to which I have already referred as important, receives proper care; and, though the quantity of food taken may be much in excess of what might be consumed in an American meal, yet it is taken in small quantities at a time and interrupted by a free flow of conversation, generally on pleasant subjects, with mastication well performed because the food is enjoyed for its own sake and not bolted. It is impossible not to believe that such a delicately adjusted mechanism as that of the gastrointestinal tract and secreting glands is not profoundly influenced by the conditions under which it is exercised; and he who would successfully deal with much of the digestive and nutritional disturbances common to American life must give proper attention to this side of practice, and teach not merely food selection and quantitative feeding, but also prescribe the conditions under which the patient lives in so far as it is within our ability to control them.

Lastly, in concluding these obiter dicta, which I realize are fragmentary and not always sequential, I would make a strong plea for going slowly in arbitrary dietaries and in positive conclusions, remembering that the history of dietetics up to the present time has not been a very satisfying one to the student of medical progress; that the field of practice has been strewn with relics of discarded theories; that we have indulged as a profession in an abundance of advice, on various slender bases, and that much of what was dogmatically insisted on a few years ago has had to take a back seat in the light of a larger knowledge. It is not so long past when we found the average practitioner inveighing against soups, which were supposed to be useless and even harmful. Today we know that meat extractives may take the place of the appetite juice as a stimulant of the gastric hormone. We were equally confident that gelatin was not a food because Liebig had found dogs fed on gelatin dying of starvation. Today we know that gelatin is a very valuable food, though not a means of alone sustaining the life of the body. We were very emphatic in warning against drinking at meals, imagining, if you please, at that time that the stomach was a sack into which all things were promiscuously thrown. Today we know that fluid may be taken with meals to advantage, and does not mix with the mass of a solid meal, and so on. The fact is, in all these points the common practice of mankind has given a better clue to correct eating than the hasty conclusions from incomplete laboratory experiments, and so, when we find habits established by centuries of usage or the practice of extensive areas of the earth's surface, it behooves us to go very carefully and withhold judgment until the ground is more definitely fixed than physiological science enables us to say at present.

The High Cost of Drugs

In a recent paper read by Robert P. Fischelis, Phar. D., before the Philadelphia County Medical Society, the increases in the price of drugs, due to the war, were given, and, although we have been reading newspaper accounts of drug prices having mounted to several thousand percent, Mr. Fischelis' figures rather tend to modify the exaggerated statements, only one one-thousandth percent increase being noted—viz., that of atropin. Some of the increases are as follows, and hospital buyers ought to be advised of these increases because there is no doubt that some wholesale houses have been taking advantage of the war scarce to obtain larger than a fair profit:

	Percent
Granulated opium has increased	58
Morphin has increased	16
Codein has increased	10
Cinchona has increased	40
Quinin has increased	180
Coca has increased	20
Cocain hydrochlorid has increased	45
Nux vomica has increased	33
Strychnin has increased	67
Aconite has increased	59
Belladonna has increased	350
Atropin has increased	1,000

The Hamilton Hospital, Hamilton, Mont., has found it necessary to increase its capacity and has leased outside quarters for its nurses, thus providing additional space for patients. The Hamilton Hospital, a community institution, was established four years ago in quite a small way, but it has enjoyed a substantial growth. The hospital has been self-supporting, and at the end of its fourth year the directors find that after all debts have been paid they have over $500 left in the treasury.

By the will of the late Mrs. Electa Friday, of Everett, Wash., the Everett Hospital, which was owned by Mrs. Friday, is bequeathed to her half-sister, Miss Julia Gould, of Hartford, Wis. The institution will hereafter be known as the Electa Friday Memorial Hospital, and Miss Gould has announced that she plans to erect a new home for the hospital proper and use the old building for isolation purposes. The present capacity of the Everett Hospital is understood to be about 50 beds.

INSTITUTION LIBRARIES

Conducted by E. KATHLEEN JONES.
Librarian McLean Hospital, Waverly, Mass.; member Institutional Libraries Committee, American Library Association.

Please address items of news and inquiries regarding Institution Libraries to the editor of this department, McLean Hospital, Waverly, Mass.

Institution Libraries League

In organizing this league, which was started last fall with about thirty members, it has been thought best to change the name to the Association of Hospital Librarians, because only those interested in hospitals responded to the invitation to join. The term hospital, however, includes general hospitals and those for nervous and mental diseases, schools for the feeble-minded, and hospitals and homes for crippled children, and also medical as well as general libraries. The object of this association is to promote the interests of libraries in hospitals and similar institutions throughout the United States and Canada, and for the mutual assistance of those engaged in the administration of these institutions. The constitution and by-laws of this association, together with the list of officers and members, will be published in a future issue of this journal. All persons interested in this association will please communicate with its secretary, whose name and address are given at the head of this department.

Book Reviews

There are several very good books to be reviewed this month. Booth Tarkington's "Seventeen" is the story of a love-sick seventeen-year-old boy and his long-suffering family and neighbors. Olive Prouty has written a sequel to "Bobby, General Manager," entitled "The Fifth Wheel," in which some of the incidents of the first book are recounted from Ruth's point of view, and the story is carried on by Ruth. Amy McLaren has published a pleasant little Scotch story called "The Heir of Duncarron." P. G. Wodehouse has given us "Uneasy Money," an international romance. Two detective stories are Carolyn Wells' "Curved Blades," and "The Ocean Sleuth," by Drake.

"Cam Clarke," by John Walsh, is the delightful tale of a year in the life of a mushroom western town, and incidentally of Cam, his mother, and his friends. Mrs. Porter has written another cheerful story of a wonderful boy in "Just David," and Mrs. Sterrett's "Mary Rose of Mifflin" tells of the doings of a friendly child. "Some Elderly People and Their Young Friends," by S. Macnaughtan, is a story of the rising and the risen generations told with considerable quiet humor.

Here are two novels much above the average—Justus Miles Forman's "Twin Sisters," a study in heredity and environment which holds the reader's attention from beginning to end and is not too psychological, and "The Rudder," by Mrs. Watts, which contains some very clever characterization and some very lovable people.

"The First Hundred Thousand," by Ian Hay (Captain Beith), tells, with all the author's characteristic mingling of humor and pathos, of the training of Kitchener's first army from raw recruit to soldier under fire in the trenches, and makes us know these men and their officers personally. It is a book one cannot leave until it is finished. Colonel Roosevelt's "Fear God and Take Your Own Part" and his "A Book-Lover's Holidays in the Open" are two books which his admirers will want to read; also Washburn's sketch of the Colonel, entitled "Theodore Roosevelt: the Logic of His Career." The reader with a mechanical bent will like Bishop's "Story of the Submarine."

"Our Miss York," by E. B. Morris, is an interesting story, good reading and wholesome, as is also Alice Duer Miller's southern romance, "Come Out of the Kitchen." Middle-westerners especially will enjoy "God's Puppets," by William Allen White, and "Old Judge Priest," by Irving Cobb, both collections of short stories.

Rather more ambitious, and on the order of novels rather than stories, are "The Seed of the Righteous." by Juliet Wilbur Tompkins, and "Under the Country Sky," by Grace Richmond, both thoroughly readable and full of "nice" people, the sort one likes to know.

A Novel Use of the Bright-Colored Fiction "Wrappers"

Although handicraft work does not belong, strictly speaking, to the library, yet the library does seem to supplement all other departments. We have been asked to tell our readers about the beads made by the patients in some of the Massachusetts hospitals from fancy fiction "wrappers" and other bright-colored pictures. These are really very charming when made well, and are perfectly easy to do. Strung as bead portieres, window or lamp shades, they look exactly like the best and most expensive Egyptian or Florentine beads.

Cut the paper in perfect triangles of from ½-inch to 1½-inch bases, the perpendicular as long as your picture allows. Round the apex into a very slightly convex curve. Roll these triangles, beginning with the base, on toothpicks or stiff twine, being careful to roll them evenly; paste the tip down on the rolled bead. Dip the beads, still on their toothpicks or string, into colorless shellac and hang them up to dry. When perfectly dry, pull out the string. A little experimenting will show how to cut so as to give good color effects and to give different shapes and sizes to the beads. Long, thin beads need a base of an inch or more; short, fat ones a shorter base and longer perpendicular. Many patients like to make these beads when they are unable to do work which requires more concentration.

Notes of the Libraries

The medical library of the Cincinnati General Hospital reports 20,101 volumes and 3,277 pamphlets that are free for reference to any physician in Cincinnati and vicinity and also to those interested in the allied sciences. As yet no work has been undertaken by this library to furnish patients with reading material, although the social service department has done something along this line.

We have the promise for the July number of this department of an article by Miss Alice M. Jordan, of the Boston Public Library, on books for children in hospitals and homes. Miss Jordan is an authority on children's books, and we have no hesitation in saying that this article will be of great value as well as interest. Reprints of the article may be obtained at cost from the secretary of the Association of Hospital Librarians, Miss Ida M. Woodcock, Butler Hospital, Providence, R. I.

NEW EQUIPMENT

A Support for the Patient During Nephrectomy

DESIGNED BY ANDERS PETERSON, M. D.,
Assistant Medical Director of the Los Angeles County Hospital.

It is a well-known fact that much difficulty is experienced in maintaining the patient in a suitable position for lumbar nephrectomy by the use of sand bags and the ordinary kidney piece found attached to most operating tables.

The apparatus here illustrated is designed to meet the conditions most desirable during operation upon the kidney by the lumbar route—namely, a fixed position of the patient, resting upon the opposite side to the lesion, lateral flexion of the spine, and a comfortable plane of support to the patient. The patient is first etherized in the regular position, and is then lifted from the cart into the box, the operating table mattress having been placed over the central portion of the apparatus. A thin pillow may also be placed at the bottom for further protection to the patient.

The advantages which this support offer is that it holds the patient in a fixed position, and it can be adjusted to suit the size of any patient. It is inexpensive, and can be made in any carpenter shop. It can be transported easily, and can be used upon any table.

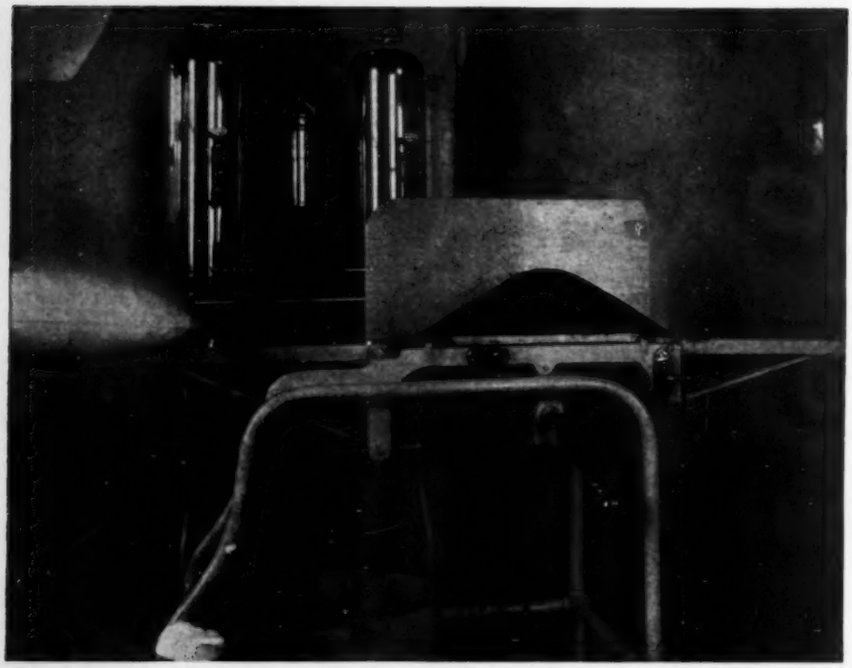


Fig. 1. The apparatus is placed upon an ordinary examining table. One side has been removed to show the central curved portion.

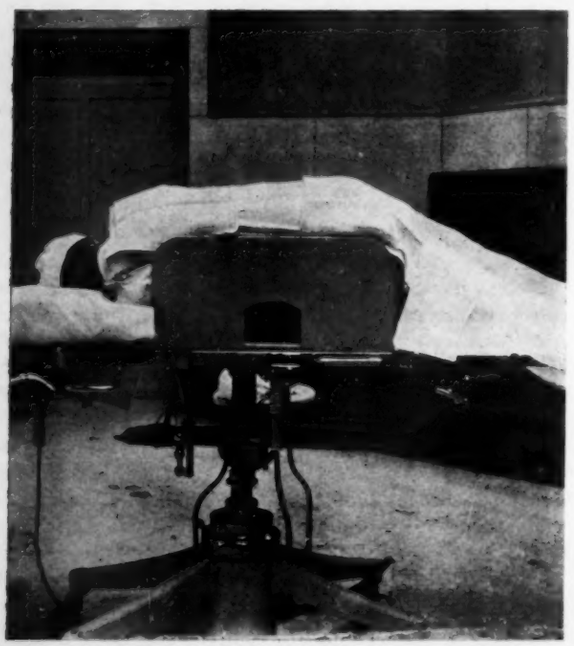


Fig. 2. Shows the patient placed into the support.

Pad Counting Device

BY DR. R. H. JACKSON, Madison, Wis.

The apparatus illustrated shows a combined pad rack and compartment table, which has been in use for several years at the Madison General Hospital and has proven very satisfactory. It consists of an enameled iron stand, with four legs on casters in order to permit its being readily brought to and removed from the operating table. On this frame rests the counting device, the lower front portion of which is a shallow tray and the back portion consists of a series of six compartments open at the top. In front of each compartment is a blunt metal hook. The entire top is removable and easily sterilized.

The device serves the following purpose: the operator drops loose pads directly into the large nickel-plated tray, thus keeping them always in the specified places. The nurse in charge of used pads is instructed to hang



Jackson pad counting device.

them directly on the hooks in front of compartments, and when all the hooks are filled she takes the six pads, rolls them together and puts them in the outer compartment, and the next six pads in the next compartment, and so on. The nurse is thus able at any moment to give an

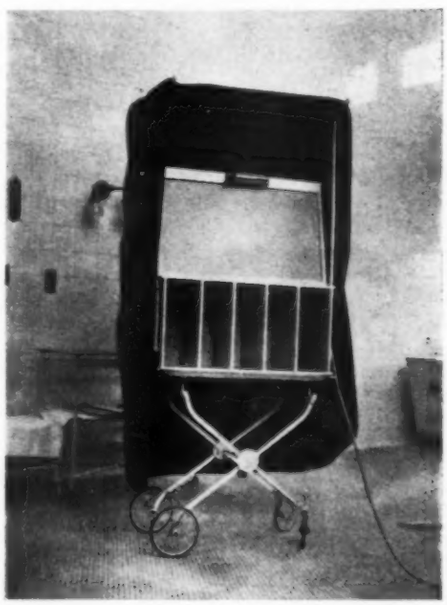
accurate account of the used pads by counting the occupied compartments, multiplying by six, and adding the number of pads still hanging on the hooks. This method keeps the greater number of used pads out of sight, and yet quickly available for further count.

Dr. Jackson states that in his experience the major number of lost pads have not been found in the abdomen, but in some out-of-the-way place, where the caprice of fate carried them on the heel of some bystander or in some other mysterious manner, and that it was to obviate this misadventure as far as possible that he designed this apparatus. The device is manufactured by the Scanlan-Morris Company, of Madison, Wisconsin.

Portable X-Ray View Box

During the past few years the science of roentgenology has made rapid progress, and is now, in nearly all instances, a means of exact diagnosis, whether the evidence be negative or positive.

Considerable difficulty has been encountered in the past by the inadequate provision for dark rooms for the examination of plates, the attending physicians being frequently compelled to go to remote x-ray rooms or send assistants, who returned with unsatisfactory reports. Inasmuch as the interpretation of plates gains in value when viewed in close proximity to the patient, and as in addition to this



Portable x-ray view box.

the plates are easily broken, soiled, or scratched by careless handling, a problem of considerable moment has been presented.

Due to these inadequate facilities, Mr. Oliver Bartine, superintendent for the New York Hospital for the Ruptured and Crippled, has designed and constructed at small cost a portable x-ray curtained view box, containing a combination plate file, as shown in the illustration. The view box is covered by a folding curtain frame, which, when telescoped, will allow passage through the narrowest doorway. This apparatus has been found extremely helpful at the monthly clinical conference meetings, and is now regarded as an indispensable factor in the daily hospital routine work.

NEW INSTRUMENTS AND APPLIANCES

VINCENZ MUELLER, Technical Editor.
GEO. W. WALLERICH, Associate Editor.
Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

Hypodermic Needles Made of Tempered Gold

It is an acknowledged fact that hypodermic needles made of platinum or platinum-iridium, and consequently rustproof, are the ideal needles for hypodermic injections. One objection to needles made of this material is that the points will not stay sharp for any considerable length of time on account of the nonrigidity of the metal, and another drawback to their general use is the comparatively high cost. Needles made of other precious and semi-precious metals, such as solid silver, nickel, etc., have been put on the market from time to time, but they have never attained the popularity of the platinum needles, mainly for the reason that the same objection of nonrigidity applies to them, as well as of corrosion resulting from sterilization, etc. Several years ago, however, a concern now operating under the name of the Precious Metal Tempering Company discovered a method of permeating knives, etc., with gold and silver, and treated the metal in such a way that the temper and consequently the edges of the knives are being preserved. The further discovery of tempering metals now enables them to manufacture hypodermic needles out of 14-karat gold.

On testing these needles the writer found that they have practically the rigidity of steel without the danger of breaking that is always present in tempered steel needles, and the manufacturers claim that they are absolutely impervious to rust or corrosion of any kind. The needles may be sterilized by steam, boiling water, or any aseptic solution. There seems to be practically no limit to their usefulness, as has been shown by a record which has been kept of some of the needles in use, which proves that they have been used in from 3,000 to 7,000 injections and are still in perfect condition.

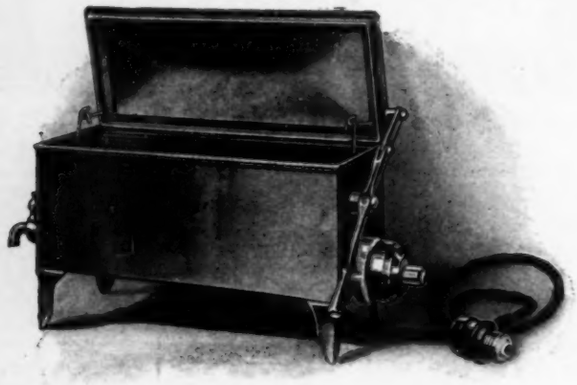
Inasmuch as the cost of these needles is lower than that of needles made of platinum, it seems that, from the point of economy as well as efficiency, they should commend themselves especially for use in hospital practice.

Electric Instrument Sterilizer.

The Wilmot Castle Company, of Rochester, N. Y., has recently perfected and put on the market a new instrument sterilizer with an electric heating unit, which has several features that are well worth considering when the purchase of such an apparatus is contemplated. The most important of these new features is that it cannot burn out in case the attendant fails to turn off the current. Some of the sterilizers now in use are provided with a so-called safety fuse which melts as soon as the sterilizer becomes too hot. On this new apparatus, however, there is an au-

tomatic device which breaks the contact even before all the water is evaporated. Consequently the necessity of attaching new safety fuses after failure to turn off the current is avoided.

A convenient electric switch, attached to the sterilizer, gives just the right amount of heat in order to work economically. The switch dial shows whether high, medium, or low current is being used. With a lever, which is



Castle instrument sterilizer.

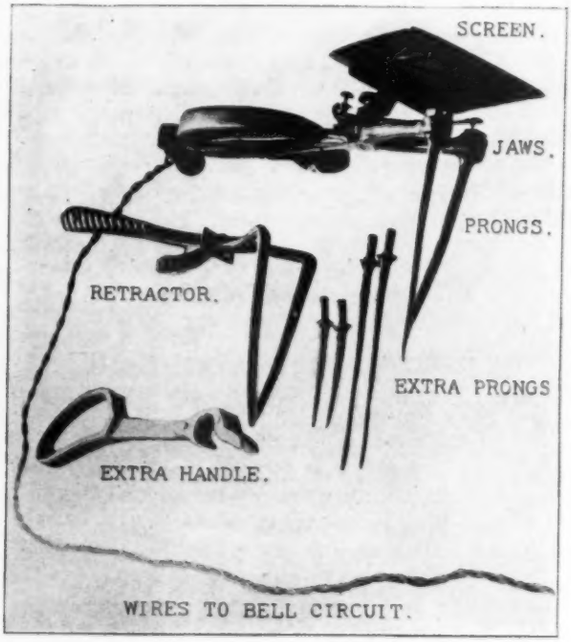
pushed downward, and which has a cool handle, the instrument tray is raised out of the boiling water and the tray stays up, so that the instruments may drain and cool off. A drain is also provided for emptying the sterilizer, as well as a small wire basket which is convenient for needles and other small instruments. The sterilizer is made in three sizes, 10½, 13, and 16 inches long, with width and depth in proportion to the length.

Instruments for Locating Foreign Bodies

Many new instruments and other devices have of late been designed by military surgeons, some of these appliances being improvements over former types and others being entirely new. There are, of course, numerous methods of locating foreign bodies; some have much merit, but the instruments here illustrated have particular value in locating metallic substances.

These instruments have been designed by Captain A. E. Barclay, of the Second Western General Hospital, Manchester, England. We recently described in this department certain instruments suggested by W. Wullyamoz, of Lusane. The equipment used by Dr. Barclay is patterned somewhat after the Wullyamoz design, but are unquestionably superior in shapes. The forceps are constructed with the two parts insulated so as to combine the telephone principle for the location of foreign bodies, and also have a fluoroscope attachment. Attached to the jaws of the forceps are two prongs. These prongs serve as both probes and grasping forceps. When the foreign body is to be removed, the ordinary localization is first made and the marker placed upon the skin. A piece of x-ray proof cloth with a hole about three inches square is then spread under the part, the operating being done through the hole in the cloth. There is thus a very small field of x-light, and this is practically limited to the area surrounding the foreign body. The x-ray apparatus is then started, the room being dark, and a preliminary examination with the fluoroscope attached to the forceps is made. If an incision is necessary, this part of the operation can be carried out without difficulty.

Frequently, however, probing through the wound with the help of the fluoroscope, the surgeon is able to locate the particle of metal. Just as soon as it is grasped and the jaws of the forceps come in contact with the foreign



Barclay's foreign body instruments.

body, the electrical circuit is completed and a buzzer or bell makes known this fact.

All the parts used can be sterilized, being made of metal or rubber, and the screen, being inclosed in celluloid, is kept sterile by means of solutions.

Improved Pressure Sterilizer

A pressure sterilizer of new design and added convenience in handling has been placed on the market. The designer has demonstrated his knowledge of the requirements of a pressure sterilizer, as evidenced from the number of radical improvements which have been made. In general form, there have been but few changes in the design of hospital sterilizers, in spite of the fact that there are certain features which have always proven of more or less inconvenience to the surgical nurse. These points seem, in the present apparatus, to have been overcome.

As shown in the illustration, the sterilizing drum is of spherical form. Both the inner and outer shell are made of seamless drawn copper. The pedestal supporting the sterilizer proper contains a compartment for sterile water, and all steam pipe connections, water connections, and waste are made under the base. This makes it a self-contained unit, having no exposed piping, and therefore presenting a neat appearance in the sterilizing room.

The usual hinged door of the sterilizing chamber is not used. The door is like a valve seat, having a ground joint fitting, which is steam tight and with which no gaskets or packings are used. The internal steam pressure holds the door firmly in place, and it cannot be opened until all steam pressure has been removed. The door is opened and closed by means of a foot lever, so that one need not touch the hot door with the hands during the time material is placed into the sterilizer or removed.

The instrument sterilizers of this same type have the trays arranged with telescopic handles, which pull out to

the front and are attached to the tray, and the handles are by this means always sterilized with the tray and instruments. Leaving the tray out from the front avoids exposing the hands and arms of the nurse to steam which always rises the instant the sterilizer is opened.



Fig. 1. Shield's dressing sterilizer.

The utensil sterilizers of the same manufacture are built along similar lines, being equipped with a hydraulic foot device for lifting the trays out of the hot water. The bed pan sterilizers are arranged with steam coils and with mufflers to prevent noise during the sterilizing process.



Fig. 2. Shield's water sterilizer.

All forms of sterilizers are heavily nickel-plated, the manufacturer stating that he believes nickel-plating to be the most satisfactory form of finish for pressure sterilizers, since white enamel has a tendency to check, change color, etc., after being used for a time.

Urological Examining and Operating Table

BY DR. HUGH H. YOUNG, Baltimore, Md.

The top of this new table is adjusted by means of a milled worm-gear and ratchet, so that it will remain fixed in any position without the aid of screws or clamps to fasten it. It can be adjusted so as to elevate the buttocks, affording excellent drainage to a sliding pan below, emptying into an oblong trough. A large recess under the buttocks and in the foot-end give ample access to the patient. The foot-end is detachable, as shown in Fig. 2, thus permitting the drain pan to be removed.

The knee-crutches are arranged so they swing anteroposteriorly and rotate on the rod. The shafts are bent in order to spread the knees far apart, and are mounted in a novel swinging socket, so that they may be tilted forward

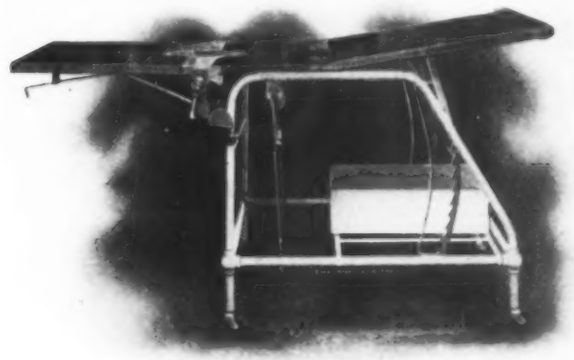


Fig. 1. Young's urological table, horizontal position.

to any angle down to the plane of the table, with the knees extended, bringing the organs to the edge of the table, while the shoulder supports prevent the patient from sliding backward.

An etherizer screen is provided, attached to and moving forward and backward with the shoulder support sockets.

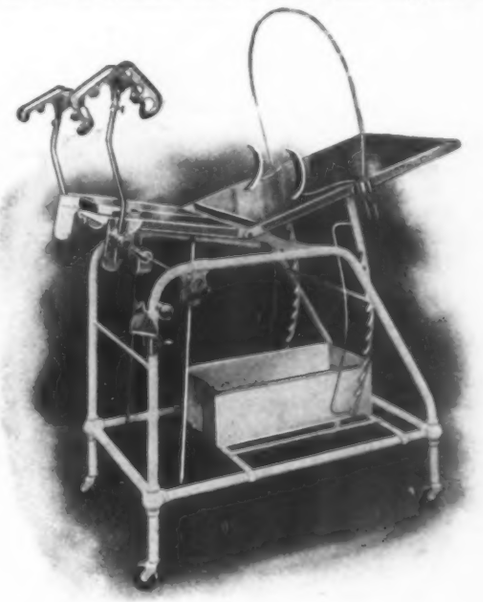


Fig. 2. Young's urological table, examining position.

The top can be quickly adjusted to an acute Trendelenburg position by a worm-gear and crank, and, although the table was originally designed for genitourinary work, it is well adapted for general surgical work.

QUERIES AND ANSWERS

Destruction of Red Ants

To the Editor of THE MODERN HOSPITAL:

There are so many helpful things given in your magazine that I feel I would like to tell you of my troubles and see if I could not receive some help.

For two years we have occupied a new fireproof building, with composition floors. For nearly a year we have been troubled with the tiny red ants. We cannot find where they come from, but they are in the kitchen on the first floor and in the diet kitchens of both second and third floors. A chemical company was very sure that its material would eliminate the pests, and I put the matter into its hands. After several applications of its material the ants were still as bad as ever, and the company feels that its efforts are without effect and so are doing nothing more. We have wrapped cloths saturated in turpentine around the legs of the tray racks, we have sprayed exterminating preparations into every place that it is possible to spray such material, and still we have ants and quite as numerous as ever. I would be very grateful for any suggestion of anything that will eliminate these pests.

A SUPERINTENDENT.

We have asked the surgeon-general of the Public Health Service of the United States to reply to this query, and the following reply comes from Dr. W. C. Rucker, assistant surgeon-general, on information secured from the Department of Agriculture, Bureau of Entomology:

The distinctively house-inhabiting ants, such as the little red, or Pharaoh's, ant, and other imported species nesting in the woodwork, masonry, or articles of furniture, etc., are often very difficult to eradicate because of their inaccessibility. If the situation of the nest can be located by following the workers back to their point of disappearance, the inmates of the nest, if nearby, may sometimes be reached by injecting a little bisulphide of carbon, kerosene, or gasoline into the opening by means of an oil can or small syringe. In the use of these substances, naturally, precautions should be taken to see that no fire is present, as all of these are inflammable. If the nest is under flooring, it may sometimes be reached by removing a section, but, as a rule, unless the colony can thus be reached and destroyed, other measures are of only temporary avail if food or other conditions continue to attract the ants and facilitate their continued breeding in the house.

The removal, therefore, of the attracting substances in houses, wherever practical, should be the first step. Ants are attracted by food material, especially bread, sugar, meat, and like substances, in pantries and elsewhere, and the nuisance of their presence can be largely limited by promptly cleaning up all food scattered by children and by keeping all food supplies in the pantry or storeroom, and limiting the amount of such articles as far as possible to daily needs.

That it is possible to drive ants away from household supplies by the use of repellents, particularly camphor and naphthalene flakes, or moth balls, has been asserted. The use of most such repellent substances, however, in connection with food supplies is impracticable, and careful tests have indicated that such substances have only slight repellent properties and bring comparatively little benefit.

The collection of ants by the use of attractive baits is frequently recommended. Perhaps as convenient a bait as any consists of small sponges moistened with sweetened water and placed in the situations where they can be easily reached by the ants. These sponges may be collected several times daily and the ants swarming on them destroyed by immersion in scalding water. It is reported also that a syrup made by dissolving borax and sugar in boiling water will effect the destruction of the ants in numbers. Remedies of this kind, however, are of doubtful value. They may be useful at the outset when the colonies are few and small, and most of the individuals may by these means be secured and destroyed. Very frequently, however, the distribution of such baits will simply result in a more wide exploitation of a good forage ground and an actual increase of the ant nuisance.

A remedy which perhaps may prove to be more efficient where it can be safely used is the use of poisoned syrup, recommended by Mr. Popenoe, of this bureau, the idea being that the ants will collect this poison syrup and convey it to their nests, so that not only the ants which collect the syrup are ultimately killed, but the inmates of nests feeding on it also succumb. Mr. Popenoe recommends the following formula for the preparation of this syrup: 1 pound of sugar dissolved in 1 quart of water, to which should be added 125 grains of arsenate of soda. The mixture should be boiled and strained, and on cooling is used with sponges, as already described. The addition of a small amount of honey is said to add to the attractiveness for ants of this mixture. Naturally, the greatest precautions should be used in the preparation of this syrup and in its safeguard afterward to prevent its being the source of poisoning human beings or domestic animals.

This method, on the authority of Mr. Popenoe, has been tried under his direction for three years, and has given very satisfactory results both in the hands of private persons and of professional insect exterminators.

Some Structural Problems

To the Editor of THE MODERN HOSPITAL:

I am contemplating putting up a two-story building, 30 by 90 feet, for hospital purposes, and a residence 30 by 40 feet at the side, a common wall to be used. I would like to get your opinion as to the best form of heat to be used —hot water, vapor steam, or some other form of steam.

I would also like to get your opinion as to comparative worth of a solid brick wall—furred, lathed, and plastered —as compared with hollow tile wall, and also as compared with an outer course of brick and 8-inch hollow tile lining, compared chiefly as to warmth, heat retaining properties, and protection against cold winds.

There seems to be a very divergent opinion on these two important subjects, and I will appreciate any information and advice you can give.

A PHYSICIAN.

We have asked Mr. Richard E. Schmidt, architect, of Chicago, to answer these questions, and he replies as follows:

In answer to your inquiry would state that for small hospital purposes, where steam is not desired for heating water, sterilizing, laundry work, or cooking, we would recommend hot water. If steam is desired for such purposes, we would then suggest a vapor system, and provide boilers of a type so that higher-pressure steam could be had for kitchen, sterilizing, water heating, and laundry purposes.

It appears to me that a two-story hospital 30 by 90 feet should be equipped with steam sterilizers, steam laundry mangle, dryer, and steam tables; a boiler for hot water heat and another for steam would not be economical in first cost or operation, and vapor heating is as satisfactory as hot water heating.

In regard to the conductivity of various types of walls, would state that a 12-inch brick wall, furred on the inside and plastered, has been found to have a uniform heat loss of approximately .20 B. T. U. per square foot per degree difference in temperature between the outside and inside atmosphere. A wall with 4 inches of brick, backed with 8-inch hollow tile and plastered direct on the tile, would give a heat loss of .28 B. T. U. per square foot per degree difference, and a 12-inch hollow tile wall, plastered inside and outside direct on the tile, would give approximately .33 B. T. U. per square foot per degree difference. If the latter two types of wall were furred, same as mentioned for the 12-inch brick wall, the heat loss could be reduced to practically the same as the 13-inch brick wall furring.

The local cost of face brick, common brick, tile, exterior cement coating, and the design are important factors in determining the relative cost.

Inasmuch as warmth, heat retaining properties and

protection against cold winds are subject to the heat loss through the walls, the construction having the least loss (as above set forth in British thermal units) is the most desirable in respect to such qualities. Fuel consumption will be in direct proportion to the loss in B. T. U.

A Hospital for Profit

To the Editor of THE MODERN HOSPITAL:

We are contemplating building a hospital, to be purely a stock company institution, and would like to have you advise us if there are any stock companies conducting hospitals today that are paying investments, and also would like to have you advise us, if possible, what percent on the investment such hospitals are paying, furnishing names of same. A SOUTHERN HOSPITAL COMPANY.

There are many hospitals in this country that are conducted for profit and there are many that make a very large profit—just how much, no one except those who can see the books can tell. Hospital owners, corporations, or individuals that are conducting their hospital for profit do not talk about their profits, because they know perfectly well that it is not a very ennobling thing, and that it is very highly unethical to make money out of the conduct of a hospital—not unethical of itself, but because where money is the motive the hospital is invariably conducted without reference to anything except money.

Sometime ago, a year perhaps, a physician participant of a stock company hospital, the other owners being three or four other medical men in the town, came to us in search of a new superintendent, and, when we made inquiry as to why he wanted to make a change, he told us that, up to a year before, their present superintendent had earned from 80 to 100 percent net on their investment, but that for the past year she had earned only 40 percent, and they were dissatisfied and wanted someone who could do better. Of course, we declined to have anything to do with any such proposition and told him what we thought about that sort of business.

It is easily conceivable that almost any hospital could be so conducted, if it were necessary, as to be self-supporting; and if it could make more money than actually necessary to meet its obligations, then it should use that money in expansion, either in the number of beds or in the quality of service to its patients; and if such a hospital could continue to make money in spite of proper expansion and adequate service to the sick, then we think it should expend its surplus in the payment of salaries for all-time medical men, so that it might give its sick people the benefit of group diagnosis and group treatment.

Our advice to you is not to have anything to do with a hospital predicated on profit, and it seems to us that, especially for a hospital using the word "Protestant" as a part of its title, it would be a most sordid thing to have its activities predicated on the earning of money for stockholders.

It would be a fine thing, of course, if your hospital could be so organized that its earnings might be adequate to give a fine service to the sick, and, if you care to have us do so, we shall be very glad to help you perfect such an organization. Of course, it would be necessary for us to have a lot of data as to your present capacity and the details of the conduct of your affairs.

Problems in the Laundry

To the Editor of THE MODERN HOSPITAL:

Can you tell me any way I can take blood stains out of the hospital linen? All our linen goes to the public laundry, as we have not the room to install a laundry of our own. The surgery linen is soaked in cold or tepid water and sent wet. Sometimes, I am sure, pieces are sent from the beds not soaked, but not very often, as I find most nurses obey rules with a very little watching. The owner of the laundry promised, every time I complained, that he would try to do better, but a short time ago he told me he could not do any better, and suggested I try another laundry, which I could not do, as he has the only modern machinery in town that could handle our work.

While writing you, I will also ask what, in your opinion, our laundry bills ought to average. We have a small hospital, all private rooms, except one ward of 3 beds. Our average last year was 10 patients daily and a staff of five nurses. Our laundry bill for the year was $1,643.50.

I hope you will answer this note either by letter or in the "Queries and Answers" of your journal.

There is no way of which we know to take blood stains out of linens unless the stains are taken out before the blood has time to dry, or at least very shortly thereafter. The unchangeable character of blood stains is due to the iron in the blood, and you know that if you put iron rust dampened next to a piece of laundry—as, for instance, a buckle—it will be only a very short time until that piece of laundry wears through. Iron destroys the fabric, rots out the threads, and there is no earthly way to get these stains out except to take out the threads that are stained, and that means the wearing out of your fabric. The only thing for you to do is to put into force a technic in your nursing corps that will provide for the immediate washing of blood out of any stained garment or fabric. We are sorry that we can give you no more encouragement than this.

In regard to the amount of your laundry bills, a small general hospital ought to use about ten or twelve pieces per day per patient. That includes the nurses' uniforms and laundry, laundry for the female help, your table laundry, and the bed laundry for patients—that is, everything in the house. We imagine that you have pretty nearly one well person to one sick person in your house—that is, an average of 10 patients—and you have five nurses, and you probably have at least five other people. In a larger hospital the laundry runs about fifteen or twenty pieces per patient per day, but, in a small hospital like yours, the greater care that can be exercised by individual attention will reduce the amount of laundry; and in a large hospital we have figured that the laundry can be done for approximately half a cent per piece, taking all sorts of pieces—that is, small things like diapers and napkins and towels, and the large flat work, such as sheets and pillow cases, and the individual stuff, such as nurses' uniforms, etc. With these facts before you, you can readily make a guess that your laundry will run somewhere in the neighborhood of a hundred and fifty pieces per day, and I should say that in a hospital of that size a cent per piece is a fair working price. That would be only about $1.50 per day, or $45 a month, or $540 a year. It seems to me that, under average conditions, that ought to take care of you, but I should say that $600 per year ought to take care of that size hospital. We do not see where you can put any such money as $1,600. Perhaps there may be some extraordinary reasons why your laundry is so high, but we are not advised of these.

Temporary Care of the Insane

To the Editor of THE MODERN HOSPITAL:

The Board of Commissioners of Huntington county is contemplating the erection of the county hospital, and, as attorney for the Board of Commissioners, I am interested in getting information on the subject of hospitals. The board has in mind the erection of such a hospital as will supply the needs of this county. At the present time the county has no provision or place for taking care of per-

sons who become insane or mentally deficient, and who are required to be held until they can be delivered to the state institutions, except that they must be held in the county jail. Before the subject of the county hospital came up it had been the intention of the board to erect a small addition to the county poor farm building, located about two miles from the city, so that such patients might be held there. Since the county hospital project has been taken up the suggestion has been made that a detention ward or apartment could be built in connection with the hospital which would serve the purpose of detaining such persons as it is necessary to detain until they can be transferred to the state institution. It has been suggested that this would be more economical; that it would remove the odium that would attach to the holding of demented persons at the county jail or county poor farm, and, furthermore, that such persons would be at the hospital, where they would receive proper medical attention. It has been suggested that such apartment or ward in the hospital can be protected and safeguarded from the other part by soundproof walls and other modern methods.

As this matter has, no doubt, come to your attention, and you have gained some knowledge through experience, I would be pleased to have you give me some suggestions and ideas pertaining to this matter. INQUIRER.

The building or unit, of which you speak for the purpose of holding mentally disturbed patients until they can be finally adjudged insane and committed has come to be a well-defined hospital unit, according to modern hospital principles in this country, and we call it the psychopathic hospital or the psychopathic service in a general hospital.

In modern medicine we have done away with all forms of physical restraint, excepting perhaps bars on windows at some places and under some circumstances, and we are sure your people are doing well to think about caring for these unfortunate sick outside of prisons and almshouses.

A great number of people become mentally disturbed as the direct cause of physical illness or hurt, and it is little short of criminal—indeed, we think it is actually criminal—to place these people under the stigma that attaches to all forms of insanity. We have some well-defined sicknesses that often terminate temporarily in insanity. For example, we have the toxic insanity following typhoid fevers; these people are mentally irresponsible sometimes for months, but eventually they nearly all get well if properly cared for. Then there are a considerable number of women who become temporarily insane following childbirth, due to the absorption of toxic principles in the blood and which operate directly on the nervous system. These women all get well eventually, although temporarily they seem to be afflicted with one of the most violent forms of insanity, but these forms of insanity are no more hereditary than they would be if the cause were a blow on the head with a baseball bat, and our civilization has no right to inflict on the subjects of these sicknesses the odium of a stain of insanity, because such an odium goes down through the generations, and is certain to do incalculable harm to a whole line of people.

There is a law in most states covering the psychopathic hospitals. Sometimes it is called the detention hospital, but, whatever it is called and however it is physically equipped, it is a very necessary adjunct to every hospital and has nothing whatever in common with a prison or poor farm.

And it is not necessary that this unit should be elaborate or expensive. For your community, for instance, we think there ought to be two or three rooms, with a device in the window of each that would permit each to be barred. If you eventually decide on this arrangement, we shall be very glad to give you a scheme by which these windows can be barred instantaneously when a disturbed patient is to be put in one of them, and so arranged that the bar can be instantaneously taken out when the room is to be used for a patient who is not mentally disturbed. Besides these two or three rooms, we think we would have a ward of two or three or four beds whose windows might also be barred when necessary. You will find that soundproofing is not necessary at all, because there are methods of treatment for those cases that make physical restraint and soundproofing practically unnecessary. We refer now to the uses of hydrotherapy, and it is not necessary that the hydrotherapeutic agents be either extensive or elaborate. About all that is necessary is a massage table—say, 30 inches high, 2 feet wide, and 6 feet 6 inches long. The best of these tables is made of wood. In practice this table has a blanket folded four or five times and laid on it, with a canvas or sheet on top of that, and the patient can then be put into a hot or cold pack on this massage table. The "packing" method is thoroughly standard in all hospitals, and the technic is well understood. We are sending you a copy of THE MODERN HOSPITAL containing a paper by Dr. O'Malley, of the Government Hospital for the Insane, Washington, D. C., in which you will find illustrations of these packs. You will also find in this article a scheme for giving the continuous bath, which is the only other form of hydrotherapy that such a service as you are thinking about would need. Patients of the most violent character can be quieted and very permanently helped by the intelligent use of one of these forms of hydrotherapy. We do not find it necessary any longer to shackle or otherwise restrain even delirium tremens patients, and, as has been shown in all the principal hospitals of the country, delirium tremens is now curable to an extent never dreamed of before.

We are making just a little bit of a sketch, crude and elementary, that will give you exactly what we are thinking about for your psychopathic unit. Instead of its being off to itself, as indicated in this sketch, it can be on any floor of your hospital, in any wing, or a part of another unit, and will never be any such disturbance to other patients, for instance, as a maternity service would be. I am also having sent you a copy of the October, 1914, number of THE MODERN HOSPITAL containing an article on the Chicago Psychopathic Hospital, which will give you a very definite idea about the modern care of mentally disturbed patients.

The "Usual Duties" of Matron

To the Editor of THE MODERN HOSPITAL:

Will you kindly tell me what are considered the "usual duties" of the matron in a small 60-bed hospital and nurses' home? The duties of matron do not seem to be clearly outlined in most hospitals, and in this instance the matron is appointed by the City Council, and no duties, except "usual duties," are mentioned. I would be pleased to have your broad views on the matter.

A TRAINING SCHOOL PRINCIPAL.

The "usual duties" of the hospital matron are, as you say, hazy and indefinite. The reason is because women who are acting as hospital matrons differ quite as widely in their capacity to shoulder work as men and women differ in other fields of industrial activity. We have known hospital matrons who relieved the superintendent of the institution of an infinite number of details of hospital work in nearly all the departments of the institution—simply because they proved themselves competent, active, and ambitious, and it has been our experience that the world generally is perfectly willing for most anyone to work who is willing to do so.

We have known other hospital matrons who merely looked after the cleaning of the house, had nothing to do

with the kitchen, had nothing to do with the wards and rooms, nothing to do with the laundry or the linens—in fact, did nothing except supervise the work of the maids and floor men.

Because of this indefinite character of the "usual duties" of the hospital matron, the whole business must be one of team work and cooperation.

But, being more specific for your information, in most hospitals the matron is expected to employ and discharge all the common help, excepting those in the scientific departments, including, of course, the nursing department. She is expected to direct the work of all the cleaning people in the house, including the work in the wards and private rooms; to handle the work in the service rooms, except the actual feeding of patients, which should be under the nursing department, and should be performed by the nurses; to look after the linens and cotton goods and the laundry work; it is her people who gather and count the soiled linens and get them to the laundry; it is her people who do the laundry work and her people who should get the clean laundry back into the linen rooms and thence into the various ward units, and it is her people who should command and operate in the sewing room and, therefore, she should be held responsible for everything concerning laundry goods. She should get regular requisitions from the nursing department for the sterilization of mattresses and blankets and pillows when it is needed, and she should see that the work is done after a technic prescribed by the superintendent of the hospital. She is expected to handle all the dining room help, and to see that the meals for interns and the common help are properly prepared and served. Usually the menus for all departments of the hospital are made by the regular dietitian, and it is the duty of the matron to see that the foods bought and ordered are properly prepared and served, and her work incident to this preparation and serving is under the direction of the dietitian or the person holding the office corresponding to that. She is expected to see that the nurses' home and the employees' home are kept in perfect order.

It can be easily understood that a matron with this line of duties could have very much friction with the nursing department unless there is cooperation in the handling of laundry goods, because, in a final analysis, the nurses use the laundry goods for their patients, and so important is it that there should be cooperation between the matron and the nursing department that we have sometimes felt that the entire laundry service should be turned over to the head of the training school in order that there might be no opportunity for friction, and in order that the responsibility and authority concerning the handling of laundry goods should be concentrated in one person.

It seems to us that if all responsibility in the hospital is concentrated in the superintendent of the institution, and he or she is broad-minded and a capable manager, the work of the department heads can be arbitrarily apportioned out, fitting each task to the person intended to perform it, and there should not be any friction in the hospital; lacking such an executive head, it is very certain that there will be friction, especially if there are some departments in which there are ambitious persons who are trying to do things.

We have very often found in a hospital a most unpopular and thoroughly disliked person whom all the department heads accused of attempting to usurp their duties and functions; on closer analysis we have found that the objectionable person was frequently the only competent person in the establishment, and her activities were an attempt to get necessary things done. We have in mind particularly one institution in which we found this condition existing, and in which the friction had existed for a good while and had grown intolerable. On our advice the board of trustees made the unpopular woman superintendent of the hospital; nearly everybody resigned, of course, and most of the resignations were accepted. New people were brought in and we do not know a hospital, for a small institution, that has been better conducted since that time. So there was a reason for the usurpation of function in this case.

You ask us for a broad view of this matter, and we have tried to give it to you; the text of our advice is team work.

THE NEW THERAPY

Occupational Work for Chronic and Convalescent Patients and Inmates of the Department of Public Charities

The therapeutic value of work for certain classes of convalescent and chronic patients, especially neurological cases, is now recognized. The Department of Public Charities, in cooperation with the New York City Visiting Committee of the State Charities Aid Association, has recently organized a committee to take charge of the development of such occupational work among the patients and inmates of the department.

Eight years ago the New York City Visiting Committee sent a teacher to the chronic patients on Blackwell's Island. In 1914 the city granted salaries for three trade instructors. Last January a meeting was held at which Deputy Commissioner Henry C. Wright presided. Testimony as to the need and value of occupational work was given by Dr. Charles L. Dana; Dr. Brush, of the Burke Foundation; George E. Barton, of Clifton Springs; Mr. Scanlon, of the Lighthouse for the Blind, and many others. Dr. Russell sent his trade instructors from Bloomingdale.

Dr. Dana said in part: "My experience has been that for convalescents, particularly mental patients, there should be something to occupy the hands while their minds are resting. I most emphatically approve of the work which is now being initiated and extended." As a result, work with the neurological patients was undertaken at once.

Through the generosity of private donors the services of a teacher of handicrafts and of a lacemaker were assured for six months. The occupation for the invalids is to be prescribed and supervised by the attending neurologists of the hospital selected and a careful record kept of the progress of the patients.

The success of the plan would be more assured if a general director, to coordinate the work of the present teachers and trade instructors of the department and to utilize the services of volunteers, could be engaged.

The work should be extended to other patients and inmates as well. In 1913 a special committee of the Board of Estimate examined 500 men at the city homes, and found 41.41 percent sick and infirm and 58.59 percent able to work. It is probable that the services of the latter could be utilized to greater advantage than at present, and that many of the sick and infirm could make attractive and useful articles. The period of stay of certain convalescent patients may also be shortened by this health-giving, hopeful work, with a consequent saving to the city. The advantage to the department by gaining these useful articles is obvious.

Dr. McCoy, of Alliance, Neb., will soon open a private hospital in that city.

HOSPITAL, MEDICAL, AND SPECIAL MEETINGS

AMERICAN HOSPITAL ASSOCIATION MEETING

The Tentative Program Indicates a Very Interesting Meeting—Important Subjects to Be Presented

The president of the American Hospital Association, Dr. Winford Smith, has completed the tentative program of the Philadelphia meeting, to be held September 26-29.

Miss Jordan's program of the Section on Small Hospitals is yet to be completed, and also the Evening Round Table for Large Hospitals.

A careful study of this program will develop the fact that it is a very strong one; topics are discussed that are most pressing at the present time. Everybody should begin now to plan to attend the convention.

TENTATIVE PROGRAM

TUESDAY, SEPTEMBER 26, 1916

MORNING SESSION—Invocation, Rt. Rev. Philip M. Rhinelander, bishop of the Diocese of Pennsylvania (Protestant Episcopal Church). Address of welcome, Mayor of Philadelphia. President's address, Dr. Winford Smith, president, superintendent Johns Hopkins Hospital. Report of Committee on Constitution and By-Laws. Medical Organization and Medical Education, Dr. Charles H. Young, superintendent Presbyterian Hospital, New York city. Discussion opened by Dr. L. B. Baldwin, superintendent University Hospital, Minneapolis, Minn.

AFTERNOON SESSION—Report of Committee on the Training of Nurses, Ella Phillips Crandall, R. N., executive secretary National Organization for Public Health Nursing, New York city. Report of Committee on Grading and Classification of Nurses, Charlotte Aikens, chairman, editor *Trained Nurse and Hospital Review*, Detroit, Mich. Discussion. The Open Door Hospital, Dr. W. L. Babcock, superintendent Grace Hospital, Detroit, Mich. Discussion, Dr. J. W. Fowler, superintendent Louisville City Hospital.

EVENING—Symposium on Out-Patient Work—1, What Dispensary Work Should Stand For, Dr. Richard C. Cabot, Boston. 2, Clinics for Venereal Disease—Why We Need Them—How to Develop Them, Dr. William F. Snow, secretary of American Social Hygiene Association. 3, Industrial Accident Cases in Dispensaries—Should They Be Accepted?—How Shall the Finances Be Managed? Speaker to be announced. 4, New Features in Dispensary Work (Committee Report), Michael M. Davis, Jr., chairman.

WEDNESDAY, SEPTEMBER 27, 1916

MORNING SESSION—Report of Committee on Hospital Construction, Dr. Walter B. Ancker, superintendent City and County Hospital St. Paul, Minn. Hospitals and Esthetics, Grosvenor Atterbury, F. A. I. A., New York city. Discussion, Mr. F. F. Leiper, superintendent P. E. Church Hospital, Philadelphia, Pa.; Dr. Herbert B. Howard, superintendent Peter Bent Brigham Hospital, Boston, Mass. The Hospital Dietary, Dr. Elliott P. Joslyn, associate professor of medicine Harvard University. Discussion, Thomas McRae, professor of medicine Jefferson Medical College, Philadelphia, Pa.

AFTERNOON SESSION—*Large Hospital Section*—Disinfection and Other Practicable Methods of Preventing the Spread of Infection in Hospitals, Dr. Robert J. Wilson, superintendent of hospitals New York Health Department. Discussion, Dr. William H. Walsh, Philadelphia, Pa. The So-Called Diphtheria Epidemics in General Hospitals—Preventive Measures, Dr. Clyde G. Guthrie, associate in medicine Johns Hopkins University. Discussion, Dr. R. R. Ross, superintendent Buffalo General Hospital, Buffalo, N. Y. Autopsies—Methods of Obtaining Same and Measures of Protecting Hospital, Dr. Milton C. Winternitz, associate professor of pathology Johns Hopkins University. Discussion, Dr. Frank Holt, superintendent Michael Reese Hospital, Chicago, Ill. *Small Hospital Section*—Program in charge of Miss Nettie B. Jordan, second vice-president, who will preside.

EVENING—Theater party, Keith's Theater. Arranged by the Entertainment Committee.

THURSDAY, SEPTEMBER 28, 1916

MORNING SESSION—Report of Committee on Bureau of Hospital Information, Dr. Thomas Howell, superintendent New York Hospital. Report of Committee on Hospital Standardization, Dr. John A. Hornsby, editor of THE MODERN HOSPITAL. A Study of Hospitals for the Purpose of Arriving at Proper Standards, Mr. John J. Bowman, director American College of Surgeons. Team-Work and Stumbling Blocks, Dr. Charles A. Drew, superintendent Worcester City Hospital, Worcester, Mass. Discussion, Dr. Charles D. Wilkins, superintendent Charity Hospital, New Orleans. Dental Clinics in General Hospitals, Dr. Thomas B. Hartzell, University Hospital, Minneapolis, Minn. Discussion, Dr. Simon Cox, superintendent New Haven Hospital, New Haven, Conn. Luncheon at Pennsylvania Hospital, 12:30 to 2:30, by invitation of the trustees and superintendent of the Pennsylvania Hospital.

AFTERNOON SESSION—*Large Hospital Section*—Report of Committee to Memorialize Congress to Place Instruments on the Free List, Rev. G. F. Clover, superintendent St. Luke's Hospital, New York city. Report of Committee on Hospital Finances and Cost Accounting, Dr. A. R. Warner, superintendent Lakeside Hospital, Cleveland, Ohio. Building the Hospital—Departments and Rooms, Mr. O. H. Bartine, superintendent Hospital for Ruptured and Crippled, New York city. Discussion, Dr. A. C. Bachmeyer, superintendent Cincinnati General Hospital, Cincinnati, Ohio. Convalescent Hospitals—Methods, Results, Dr. Frederick Brush, superintendent Burke Foundation, White Plains, N. Y. Discussion, Dr. F. A. Washburn, superintendent Massachusetts General Hospital, Boston, Mass. *Small Hospital Section*—Conducted by Miss Nettie B. Jordan, second vice-president.

EVENING SESSION—Round Table Session for Large Hospitals, conducted by Dr. John A. Hornsby, editor of THE MODERN HOSPITAL. Any member who wishes to have a topic discussed may suggest the same to Dr. Hornsby, Tower Building, Chicago, Ill. *Small Hospital Section*—Question Box Session, conducted by Dr. C. D. Wilkins, vice-president. Those who have questions which they wish to have discussed may send them to Dr. C. D. Wilkins, Charity Hospital, New Orleans, La.

FRIDAY, SEPTEMBER 29, 1916

MORNING SESSION—Report of Committee on Legislation, Dr. H. T. Summersgill, superintendent University of California Hospital, San Francisco, Cal. Treasurer's Report. Report of Auditing Committee. The Hospital and the Surgeon, Dr. S. S. Goldwater, superintendent Mt. Sinai Hospital, New York city. Discussion, Dr. John G. Clarke, professor of gynecology, University of Pennsylvania. Report of Committee on Efficiency and Progress, Dr. George O'Hanlon, superintendent Bellevue and Allied Hospitals, New York city. Election of Officers. Report of Committee on Time and Place of Next Meeting. Adjournment.

AFTERNOON—A boat ride down the river and a visit to League Island and the Navy Yard. An auto trip through Fairmount Park to Valley Forge and Washington's headquarters during the Revolutionary War. The Committee on Social Arrangements has also made provision for visits to the United States mint, Independence Hall, Wanamaker's stores, and other points of special interest at various times during the convention.

MILWAUKEE TO HAVE GREAT MEETING

Second Annual Convention of the Catholic Hospital Association Promises to Be Splendid Success—The Program and Instructions to Those Who Are to Attend

The big hospital convention for this month is that of the Catholic Hospital Association, which meets in Milwaukee on June 7, 8, and 9. Last month we published a tentative program. Below we publish the complete program, including those who will discuss papers.

The secretary of the association, Dr. Maud R. Williams, 431 Twelfth street, Milwaukee, has issued the following information for the benefit of those who expect to attend:

PROGRAM

FIRST DAY, WEDNESDAY, JUNE 7

9:00 a. m. Mass and sermon, Gesu Church, Right Rev. Sebastian G. Messmer, Archbishop of Milwaukee.

10:00 a. m. Registration. Payment of dues.

10:45 a. m. Words of greeting from the president of Marquette University, Rev. H. C. Noonan, S. J.

11:00 a. m. Address of welcome, Dr. John R. McDill, chairman of the Wisconsin Committee for the Rating of Hospitals, Milwaukee, Wis.

11:30 a. m. President's address, Rev. Charles B. Moulinier, S. J.

12:00-2:00 p. m. Recess.

2:00 p. m. Paper—"The Nature, Necessity, and Value of Team-Work in a Hospital," Dr. C. H. Mayo, attending surgeon St. Mary's Hospital, Rochester, Minn.; professor of surgery Post-Graduate School of Medicine, University of Minnesota. Discussion—Dr. M. F. Fallon, surgeon-in-chief St. Vincent's Hospital, Worcester, Mass.; Dr. G. F. Connell, St. Mary's Hospital, Oshkosh, Wis.; Dr. W. F. Scott, Oak Park Hospital, Oak Park, Ill.

3:00 p. m. Paper—"What the Physician Should Contribute to the Team-Work," Dr. Edward A. Evans, St. Francis Hospital, La Crosse, Wis. Discussion—Dr. L. W. Littig, chairman Section on Hospitals, American Medical Association, Davenport, Iowa; Dr. L. F. Jermain, dean Marquette University School of Medicine, Milwaukee, Wis.; Sister M. Veronica, superintendent of nurses Mercy Hospital, Chicago, Ill.

4:00 p. m. Address—"The Ethical Basis of Team-Work in Hospitals," Dr. Austin O'Malley, Philadelphia, Pa.

SECOND DAY, THURSDAY, JUNE 8

9:00 a. m. Paper—"What the Sister Should Contribute to the Team-Work," Mother M. Esperance, St. Mary's Hospital, Minneapolis, Minn. Discussion—Dr. D. S. Fairchild, editor Journal of the Iowa State Medical Society, Clinton, Iowa; Dr. Edward L. Tuohy, St. Mary's Hospital, Duluth, Minn.; Dr. F. S. Wiley, St. Agnes Hospital, Fond du Lac, Wis.; Dr. Nora Crotty, Cincinnati, Ohio.

10:00 a. m. Paper—"What the Intern Should Contribute to the Team-Work," Dr. E. H. Beckman, attending surgeon St. Mary's Hospital, Rochester, Minn. Discussion—Dr. Raymond P. Sullivan, Brooklyn, N. Y.; Dr. John W. Lane, surgeon-in-chief St. Elizabeth's Hospital, Boston, Mass.; Dr. F. C. Schuldt, St. Joseph's Hospital, St. Paul, Minn.; Dr. L. M. Warfield, assistant superintendent Milwaukee County Hospital, member of faculty of Marquette University School of Medicine.

11:00 a. m. Paper—"What the Nurse Should Contribute to the Team-Work," Miss Adelaide M. Walsh, president Illinois Board of Nurse Examiners, Chicago, Ill. Discussion—Sister M. Regina, superior Mercy Hospital, Wilkes Barre, Pa.; Miss Mary C. Wheeler, superintendent Illinois Training School for Nurses, Chicago, Ill.; Dr. W. C. F. Witte, member of faculty of Marquette University School of Medicine, St. Mary's Hospital, Milwaukee, Wis.

12:00-2:00 p. m. Recess.

2:00 p. m. Paper—"What the Patient Should Contribute to the Team-Work," Dr. W. E. Fairfield, St. Mary's Hospital, Green Bay, Wis. Discussion—Dr. John R. McDill, chairman of the Wisconsin Committee for the Rating of Hospitals, Milwaukee, Wis.; Dr. John A. Hornsby, secretary of Section on Hospitals American Medical Association; editor of THE MODERN HOSPITAL, Chicago, Ill.; Dr. M. J. Cronin, associate physician-in-chief St. Elizabeth's Hospital, Boston, Mass.

3:00 p. m. Paper—"What the Chaplain Should Contribute to the Team-Work," Rev. F. W. Tracy, chaplain St. Mary's Hospital, Rochester, Minn. Discussion—Rev. Geo. A. Metzger, Brooklyn, N. Y.; Rev. J. B. Illig, Sacred Heart Sanitarium, Milwaukee, Wis.; Dr. T. L. Harrington, lecturer in hygiene and public health, Marquette University School of Medicine, Milwaukee, Wis.

THIRD DAY, FRIDAY, JUNE 9

9:00 a. m. Symposium—"The Rights of the Patient." Paper 1—"The Medical Profession's Obligation to the Patient Who Needs Hospital Care," Dr. Henry A. Christian, Hersey professor of theory and practice of physic, Harvard University School of Medicine; physician-in-chief of the Peter Bent Brigham Hospital, Boston, Mass. Discussion—Dr. Karl Doege, St. Joseph's Hospital, Marshfield, Wis.; Dr. Rock Sleyster, secretary Wisconsin State Medical Society; chief of the Hospital for the Criminal Insane, Waupun, Wis.; Dr. W. H. Washburn, associate professor of medicine Marquette University School of Medicine, Milwaukee, Wis. Paper 2—"The Hospital's Obligation to Every Patient Who Enters:" a, Through Its Selection of Staff; b, Through Its Selection of Interns; c, Through Its Selection of Nurses; d, Through Its Selection of Equipment; e, Through Its Selection of Diet; Dr. John T. Bottomley, surgeon-in-chief Carney Hospital, Boston, Mass. Discussion—Dr. Henry J. O'Brien, St. Joseph's Hospital, St. Paul, Minn.; Dr. J. M. Dodd, secretary State Board Medical Examiners, Ashland, Wis.; Dr. Curtis A. Evans, Milwaukee Hospital, Milwaukee, Wis. Paper 3—"The Staff's Obligation to Every Patient Who Enters the Hospital," Dr. B. F. McGrath, professor experimental and junior surgery, Marquette University School of Medicine, Milwaukee, Wis. Discussion—Dr. A. H. Levings, professor of surgery Marquette University School of Medicine, Milwaukee, Wis.; Dr. John M. Beffel, member of State Board of Medical Examiners; member of Wisconsin Committee for Rating of Hospitals.

12:00-2:00 p. m. Recess.

2:00 p. m. Business meeting. Reports of officers. Election of officers.

3:00 p. m. Meeting of new board of directors.

NOTE.—Papers should not be longer than twenty minutes or half an hour in the reading. Copies of papers should be sent to the secretary, Dr. Maud R. Williams, 431 Twelfth street, Milwaukee, Wis., in time to be sent to those who are to discuss them, some time before the meeting, as many of those who will discuss papers live at a considerable distance.

NOTICE FROM THE SECRETARY

The second annual meeting of the Catholic Hospital Association will be held at Milwaukee, Wis., June 7, 8, and 9, 1916, in the auditorium of the Gesu school building, Thirteenth and Sycamore streets.

All Catholic hospitals are requested to send delegates to this meeting. All doctors and nurses in good standing, and individuals interested in hospital work, are cordially invited to attend. A hospital may be represented by one, two, three, or more representatives, but the payment of the annual dues of $5 entitles the hospital to only three votes. Individuals wishing to be members—i. e., sisters connected with hospitals, or interested in hospital work, nurses, doctors, or individuals interested—may join as associate members, and the payment of the annual dues of $2 entitles each to one vote.

Masses will be said daily at the Gesu church, two blocks from the Gesu auditorium, from 5:30 to 8:30 a. m.

Last year there was some difficulty about board and lodging. All did not write as requested to make reservation, and some of those who did make arrangements found accommodations elsewhere without giving notice of the change. Board and lodging can be obtained at the rate of $1 a day for the three days of the meeting, and from $5 to $6 per week for those remaining to take the summer courses to be given at Marquette University School of Medicine.

Notice of the number of delegates to the convention should be sent to the secretary not later than May 25. Those who cannot make arrangements for board and lodging, and wish to have reservations made here, will kindly notify the secretary in writing not later than May 25.

To reach the Gesu church and Gesu auditorium: those arriving on the Northwestern line will take a Twelfth Street car in front of the depot on Wisconsin street and ride west to Eleventh street and Grand avenue. Those arriving on the Milwaukee Road or Soo line will walk two blocks north from the depot to Grand avenue, take either a Wells or Twelfth street car going west on Grand avenue and get off at Eleventh street; then walk one block west to the Gesu church and two blocks west and one block south to the Gesu Auditorium.

MAUD R. WILLIAMS, M. D., Secretary,
431 Twelfth street, Milwaukee, Wis.

KANSAS HOSPITAL ASSOCIATION MEETS

The President Presents Address on Changes in the Hospital Idea—A Large Attendance and New Members at the Meeting.

The Kansas Hospital Association met in Topeka on May 2. The association has been growing during the year, and the meeting was far larger than the one held last fall.

The officers elected for the ensuing year were: president, Dr. Samuel Murdock, of Sabetha; vice-presidents, Dr. J. C. Hall, Dr. W. F. Shelton, and Dr. George W. Jones of Lawrence; secretary-treasurer, Dr. W. R. Dillingham, of Halstead. The members of the executive committee are Drs. Goodsheller, Trueheart, and Axtell.

The next meeting will be at Salina, Kan., about the first of May or the day before the meeting of the State Medical Society at that place.

Sister Catherine Voth, member of the State Board of Registration and Examination of Nurses, read a very interesting paper on "The Training Schools for Nurses in Kansas," which was well discussed.

Dr. R. Claude Young, of Arkansas City, read a paper on "The Responsibility in Cases of Hot Water Bottle Burns," about which everyone present seemed to have some knowledge. Very few hospitals had not had some experience with burns.

Dr. F. W. Shelton, of Independence, read a paper on "The Small Hospital and The Training School." Most of the hospitals represented have training schools, and most of them thought they could hardly conduct their hospitals at the rate they were now charging without training schools. The necessity of the practical as well as theoretical work being combined was well brought out.

Dr. W. J. V. Deacon, of the State Board of Health, read an interesting paper on "How to Make Out Vital Statistics Reports."

The address of the president, Dr. J. T. Axtell, of Newton, was one of the best features of the meeting, and those present thought there were some very sensible things in it. The address follows:

Thirty years ago the Axtell Hospital was organized in Newton. It was ready for patients February 1, 1887. We had four rooms for patients. The staff consisted of myself and one partner. We knew enough to put the hospital facing a park, between the depots, and on the highest ground in Newton that was reached by the sewer, and we knew little else about hospitals.

The hospital idea was not popular. A hospital was a place for poor people or for those who had no homes. Even where operations were necessary, our best people preferred to have the work done in their homes. There were few trained nurses in this country, and we then depended on practical nurses and relatives of the patient for nursing.

The hospital idea, as you know, has grown until now it is known to be the best place to take care of the sick. Hospitals are not only prepared to take care of the sick in the best way, but they are accustomed to doing so and can do it with the least friction and waste of energy. Think how one sick person in a home will demoralize the whole household, and possibly a whole neighborhood, in their efforts to nurse and care for the patient, when an additional patient in a hospital will get perfect care without a ripple of excitement.

About each hospital will be grouped the best trained physicians who specialize in their different lines of work, and who, by their training and experience, are the best qualified to make a diagnosis, and carry out the treatment, whether medical or surgical. End results can be followed up from records and the best methods can be finally determined.

The meeting together of physicians in hospitals diagnosis and treatment stimulates each to further study, more accurate diagnosis, and better work. The man who works alone is more likely to get into ruts, does not have his work checked up, and lacks many of the incentives for research and study that hospital physicians have.

From a financial standpoint, hospitals are not and probably should not be any particular success. The poor we have with us always, and they are even more likely to become sick and need hospital care than are those who are better fixed in this world's goods. A physician usually prefers to take care of most of the poor people, who appreciate his services, rather than send them to the county doctor, but this he can do without much actual expense. He is principally out his time and perhaps some medicine. But a hospital that cares for a destitute person must see that he has medical and surgical care, board, clothing, light, heat, baths, medicines, and all the necessary care of trained nurses. This is no little expense, but is something we can scarcely avoid even if we wished to do so. The physician who sends all of his pay patients to a hospital expects, or at least wishes, the hospital to care for an occasional destitute case. Our own experience in prosperous Kansas is that about one person in ten sent to a hospital is unable to pay his way. In cities this proportion may be greater. Neighbors, churches, and lodges often go together and pay a patient's hospital expenses, and this is right and should be encouraged, and physicians should meet such charity half way.

The popular conception of a hospital is more or less connected with its charity features. Our earliest hospitals were generally controlled by the churches and supported by donations and contributions. It is yet a popular thing for people with few or no relatives to leave part of their substance to hospitals. These endowments and this charity feature make it impossible to put a hospital on a purely business, dividend-paying basis and compete with other hospitals. About all a hospital can expect to do is to collect enough money from its pay patients for the running expenses of the hospital and to support its charity patients. It is seldom that anything can be saved for rent or dividends, and, if it could be done, it should go to a fund for more and better buildings and equipment, for hospitals must grow, and more and more people in the future will take advantage of hospital facilities than have done in the past. In Germany it is very rare for anyone to remain sick in his own home. The spirit of economy and efficiency, of which we hear so much, takes them to a hospital for better care at less expense.

For years our statutes have provided that institutions used exclusively for charitable and benevolent purposes were not subject to taxation. No hospitals in this country come under that strict letter of the law, as all hospitals receive pay from some of their patients. The courts, by their rulings, have modified this statute and have repeatedly ruled and have established the principle of law that it is the *use* to which a property is put that determines its liability for taxation, and not the ownership of the property. If a church or charity organization owns a piece of property and rents it to mercantile or other purposes for gain, that property is subject to taxation, while, if an individual or corporation owns a piece of property which is used for a church or any charitable purpose, it is not subject to taxation. It is the use and not the ownership which determines the question. The courts have also ruled that organizations receiving pay from some of their patients, and whose surplus is used for charity and not for private gain, are charitable associations and are not subject to taxation.

In this state at present the county clerks are usually the county assessors, and, if assessments are made on property which is supposed to be used for charitable or benevolent purposes, the recourse is to the state Tax Commission. The state Tax Commission has ruled and maintains that the hospitals of Kansas, no matter how owned —whether publicly or privately—that are under the jurisdiction of the state Board of Control are not subject to taxation. These hospitals are supervised by the state Board of Control, visited by them, and make annual reports of all work done, charity and otherwise. If the work done, as shown by the report, is satisfactory to the Board of Control, the hospitals are retained and a part of the state's fund for charity is given to the hospital. It is in this way that all the hospitals of Kansas which are not taxed receive their immunity from taxation. It is the theory that the counties should not tax what the state considers charity and helps to maintain. If, however, the county commissioners in the several counties do not accept the decision of the Tax Commission, the Tax Commission, in reference to hospitals, does not assume the office of sheriff and does not attempt to enforce its order. It can rule on the question, but does not force the county commissioners to accept its ruling. If the county commissioners refuse to do so, the only recourse of the hospital is through the courts of the state. This question is liable to be tried in the courts at any time, and means much to every hospital in Kansas. When it is tried, it certainly will be to the advantage of every hospital to make itself personally interested in the question.

In looking at hospitals from these viewpoints, it would seem to me that every town of several thousand inhabitants in Kansas could organize and maintain a small hospital if all of the physicians of the town would work together in harmony for their own good and that of the community. There are always enough citizens with civic pride in a town who will give of their money toward such an organization. One or two physicians cannot support a hospital, and therefore it is necessary that all shall work together or the enterprise will fail; but if physicians see their own advantage in the matter, they will work together. The advantage of laboratory, x-ray apparatus, and other things used in common being owned together, and not by each one separately, is of immense importance.

Specializing in certain lines of work is another important item, for it is by specializing and seeing a large number of cases that certain doctors become proficient in any one line of work, and the best paying patients of a small town will go to larger towns and to physicians who specialize in their practice. In this way there is a loss to the physicians and to the small town that could be saved if hospitals were built and physicians, by specializing and seeing more cases of a certain kind, became more skillful. If all the doctors of a town should try to be surgeons, or eye specialists, or nerve specialists, or genitourinary specialists, no one would become as proficient as he could if the work were divided.

In the organization of these hospitals it is my belief that they should not be made private corporations. There should be no capital stock issued and no dividends declared. The money that is used to build these hospitals should be donations, and what the hospital may save in its freedom from taxes and the surplus, if it should be fortunate enough to have any, can go to charity and for more and better buildings and better equipment.

FOREIGN CORRESPONDENCE

In the Mediterranean War Area

WORK IN CIVIL HOSPITALS

The question of the medical care of civilians in civilian hospitals during the existing emergency has given rise to some anxiety, and has been considered at several meetings of the profession. The difficulties met with were first brought up for discussion with regard to the position in Manchester. At the Royal Infirmary in this city, twenty-seven of the thirty-three members of the honorary medical staff were (at the end of September, 1915) doing military duty of some kind, and the resident staff had been reduced to eight, who had to deal with a very large number of emergency cases, being assisted in this work by the senior students. Similarly, at the Ancoats, Salford, and St. Mary's hospitals the visiting and resident staffs were much depleted. At a meeting in London to consider the general question of scarcity of resident medical officers, Dr. Verrall stated that in some of the smaller provincial towns the hospitals were unable to obtain any residents at all. Mr. Bishop Harman expressed the opinion that at no very distant time every doctor of military age would be required for military service. He suggested that the way to meet the difficulty would be for the visiting staff of civil hospitals to undertake hospital duty for a day at a time, spending the whole twenty-four hours within the hospital. This has always been the military practice, there being an "orderly officer" for the day, who is on the spot and always available for an emergency. This procedure has already been adopted at the West London Hospital. Dr. Galloway agreed that it might be necessary for the visiting staff to undertake a twenty-four-hour tour of duty in rotation. Lieutenant-Colonel Sir James Barr, consulting physician to the Liverpool Royal Infirmary, has declared emphatically that "everything should be viewed from a military point of view, and the medical care of the civil population must be placed a long way behind that of our fighting men." He considers that all the medical work of the country can be carried on by medical men over military age, and that the young men should be set free for foreign service; if this country cannot produce the men that are required, "there will be no course open but to apply to the United States to fill up the necessary complement."

In Manchester the work of the Royal Infirmary is, under ordinary circumstances, divided among three establishments—an accident and out-patient department in Roby street, an out-patient department in Parker street, and the hospital itself in Oxford street, with 836 beds. Consequent on the war requirements, 60 beds at the Roby street branch were allocated to sick and wounded soldiers (in addition to some 250 beds in the central institution), and the out-patient work had to be discontinued. Again, in October it was found necessary to close the out-patient department in Parker street, so large a proportion of the infirmary staff being engaged in war work. The second western general hospital, whose headquarters are at Manchester, has 3,000 beds distributed among twenty-two different buildings in the city; in addition, there are 7,000 more beds available in auxiliary hospitals within the area, to which patients could be drafted. It must be allowed that the position becomes a difficult one with which to deal, as regards adequate supply of medical aid, in some cases. At the Royal Infirmary the resident staff normally numbers twenty-three, and in October there were only eight. At St. Mary's Hospital, which receives more than 100 maternity cases a month, most of them difficult, and is also a gynecological hospital, there are normally seven resident medical officers, but at present there are only two. There is no need to give further instances of the scarcity of young medical men available to fill the posts of resident officers in hospitals and infirmaries throughout the country.

Very extensive provision has been made at Liverpool for military requirements. The City Hospital at Fazakerly, of the pavilion type, standing in airy grounds, accommodates 500 military patients. Highfield Hospital, an almost new building, in a healthful situation, has 500 beds; the West Derby Union Infirmary, at Mill Road, has 400 beds; and that of Toxteth Union 100 beds. All these establishments are entirely given over to the needs of the army. In addition, 200 beds are provided at the Woolton Hydropathic and at the Royal Infirmary, 600 beds at Southport, 250 at Birkenhead, etc., so that in the Liverpool district provision is now made for about 5,000 military patients.

At Belfast the exhibition buildings were adapted to hospital requirements and handed over to the military authorities some time back. A new block has been erected, continuous with the one previously occupied, so that 200 patients can now be accommodated in what is called the Ulster Volunteer Force Hospital.

The first hospital to be set apart for the accommodation of wounded officers in Scotland, known as the York Hill Officers' Hospital, was opened at Glasgow in September, in the new children's hospital at York Hill, the other half being occupied by children under twelve years of age. The building is admirably situated in spacious grounds, and is well adapted for the purpose. Many other hospitals of moderate size and private mansions in Scotland have been placed at the disposal of the military authorities as convalescent hospitals and homes for wounded soldiers, in several instances under the administration of the Red Cross Society.

At Englefield Green, near Windsor, a hospital of 120 beds, arranged in six pavilions, has been handed over to the War Department by the Red Cross Society and named the Princess Christian British Red Cross Hospital. These pavilions are built in a semicircle, facing southward, and each of them has a canvas-covered veranda, projecting about 8 feet, to which the patients can be wheeled so as to enjoy the air and magnificent view over Windsor, its castle and park. The construction is of well-seasoned pitch pine, lined internally with asbestos; the warming is by gas radiators and by slow combustion stoves, and lighting is by electricity. Except for the medical attendants and the male orderlies of the St. John ambulance brigade, the whole staff consists of ladies, including the quartermaster and the superintendent of the x-ray department.

PREVENTION OF TYPHUS

In view of the spread of typhus through the medium of lice (two German investigators, Jochmann and von Prowozek, having fallen victims to the disease), the disinfection of hospital buildings and patients' clothing has be-



Fig. 1. A French Red Cross post behind the first line of trenches in the Champagne district.



Fig. 2. An emergency operating room in a French barn, showing a French surgeon-general attending to the wounds of an officer. Behind the lines in the Meuse district many barns and farm houses have been converted into temporary hospitals, where urgent operations are performed before the wounded men are moved to the large hospitals in the cities.



Fig. 3. A Russian hospital detachment. Most of the ambulances of the Russian army are drawn by horses and are of primitive construction, presenting a remarkable contrast with the modern autoambulances used by the troops of other countries.

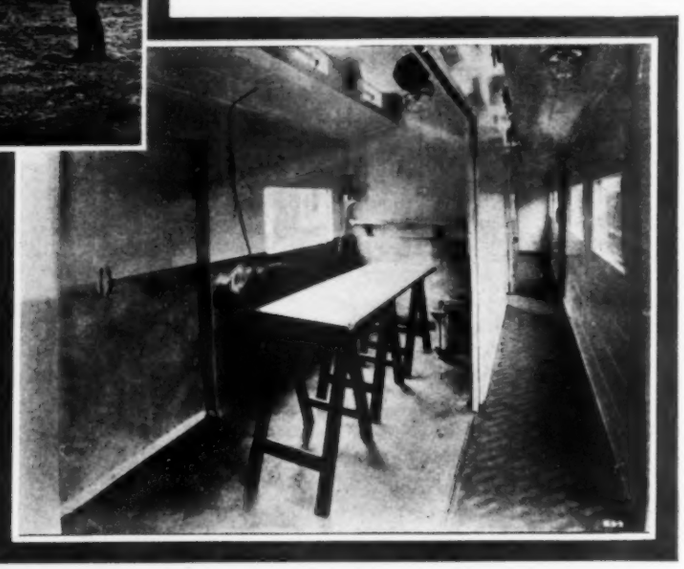


Fig. 4. The interior of a pharmacy car connected with an ambulance train for the use of troops in France, constructed by the London & Northwestern Railway Company of England. The car has accommodation for all necessary medical material and appliances, and is also provided with a surgical treatment room, with operating table, etc.

Some illustrations depicting scenes in the war in Europe.

come an important matter for those in charge. A large building, such as a factory, is converted into a disinfecting station; the men are thoroughly washed with soap and water in baths, and their clothing is disinfected by steam (except leather articles, which are exposed to dry heat). The detail, as practiced by Professor Galewsky at Königsbruck, was as follows: all cracks and corners were washed with cresol soap (3-percent solution), and then filled up; the clothing was hung up loosely; sulphur was burned in stoves, 25 kilograms being used for a building having an area of 450 square meters (height not stated); the sulphur was distributed in sixteen stoves, and the burning reached its maximum in forty-five minutes. After three hours windows were opened, and two hours later the oc-



Fig. 1.

THE FIRST MORO HOSPITAL

Zamboanga Hospital in the Philippines Is Not Elaborate, But Does Good Service for Uncle Sam's Antipodean Children

The Zamboanga Hospital was formally opened to the public on February 2, 1914. Plans were first formulated by the Right Reverend C. H. Brent, bishop of the Philippine Islands, for the building of this institution in 1909, but owing to



Fig. 2.



Fig. 3.

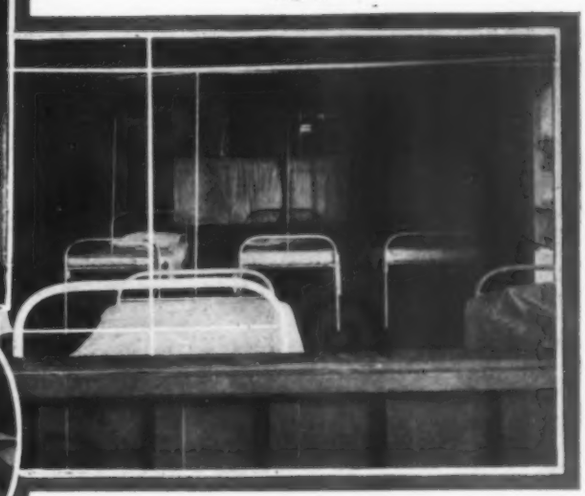


Fig. 4.





Fig. 6.

Fig. 7.

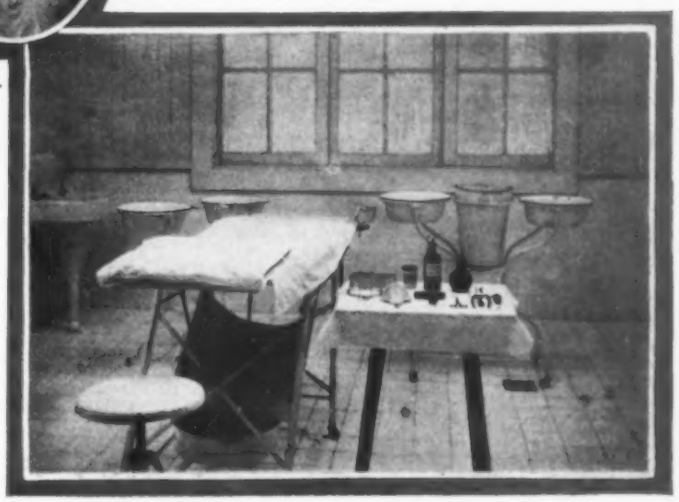


Fig. 5.

cupants (prisoners) were readmitted, having been washed during the interval. All lice and their eggs were found to have been completely destroyed, except in one parcel of shirts that had been tied up in a tight bundle. Sulphur vapor appears to be the simplest, cheapest, and most efficient disinfecting agent for vermin (and therefore against typhus).

A RETIRED ARMY OFFICER.

The First Moro Hospital. Fig. 1—Zamboanga Hospital grounds; the hospital is back in the forest. Fig. 2—The hospital. Fig. 3—Dr. C. H. Halliday and nursing staff. Fig. 4—One of the wards; note mosquito net frames. Fig. 5—Operating room; asepsis is quite the same in the Philippines as in New York or Chicago. Fig. 6—Mastura, a Magindanao Moro, before operation. Fig. 7—Mastura after operation.

lack of sufficient funds the hospital was not opened until the above date.

For a year previous to its formal opening, admirable work had been done in a temporary bamboo building, the medical work being done by officers of the United States Army Medical Corps, with the assistance of two native nurses.

The hospital, as first completed, represented an outlay of about $15,000. Of this sum, $6,000 was contributed by a philanthropist and patriot who desired his name withheld. Mrs. Leonard Wood collected about $1,200 for the woman's ward and the operating room, and about $3,000 was pledged and contributed locally. In order that the hospital could begin its career without debt or incumbrance, Bishop Brent personally assumed responsibility for unpaid pledges.

The hospital is a two-story frame building, the second story being devoted to 8 private rooms and operating, dressing, and sterilizing rooms, the first floor having three wards, with a total bed space of 22 beds, offices, dispensary, laboratory, and kitchen.

During the present year separate quarters for the nurses and superintendent have been built, modern plumbing installed in both sets of quarters and in the hospital, and an electric lighting system is being installed, all representing an outlay of about $12,000.

The Zamboanga Hospital was planned and erected to minister to the needs of the cosmopolitan population of Zamboanga and vicinity, with special efforts to reach the needy Moro. It was the first civil hospital to be opened in the department of Mindanao and Sulu, and that it is fulfilling its mission toward the public must be judged from the work now being done.

During the last six months the average monthly attendance at the free dispensary has been about 700, and the average monthly admissions to the hospital have been about 25. These figures seem very small, but, when it is considered that the dispensary patients are drawn from the Filipino and Moro races, to whom a hospital is almost an unknown institution—in fact, by the majority a place to be avoided—it would appear that the hospital had made rapid advancement among the people of this vicinity.

The clinic includes malaria in all forms, typhoid, pneumonia, cholera (during the recent epidemic), dengue, beriberi, liver abscess, appendicitis, cancer of the breast and uterus, skin diseases of all kinds and in all stages of advancement, diseases of the eye and ear, nose and throat, jaws, venereal diseases; many accident cases ranging from minor cuts to wounds necessitating amputation, and the general run of minor diseases.

Where the object of the hospital is primarily a missionary institution, it also realizes its obligation to the medical profession, and it is hoped that the staff will soon be relieved of financial worry, so that it may offer from its varied clinic its contribution toward medical science.

During the first six months of 1915 there were admitted to the hospital 59 Moros and 163 of other natives, or a total of 222 patients. In the dispensary 692 treatments were given in the same time. Quite a few patients were treated for which there is no record, as the Moros come at any hour day or night, and we have always felt that we should give our service to those who need it, even if there is not time to record the facts.

Our expense account may seem almost negligible to the big American Hospitals, with their many items of disbursements, but it is a very real burden to those who have to pare and squeeze to make ends meet. Here is one month's expense account:

MONTHLY EXPENSES OF ZAMBOANGA HOSPITAL

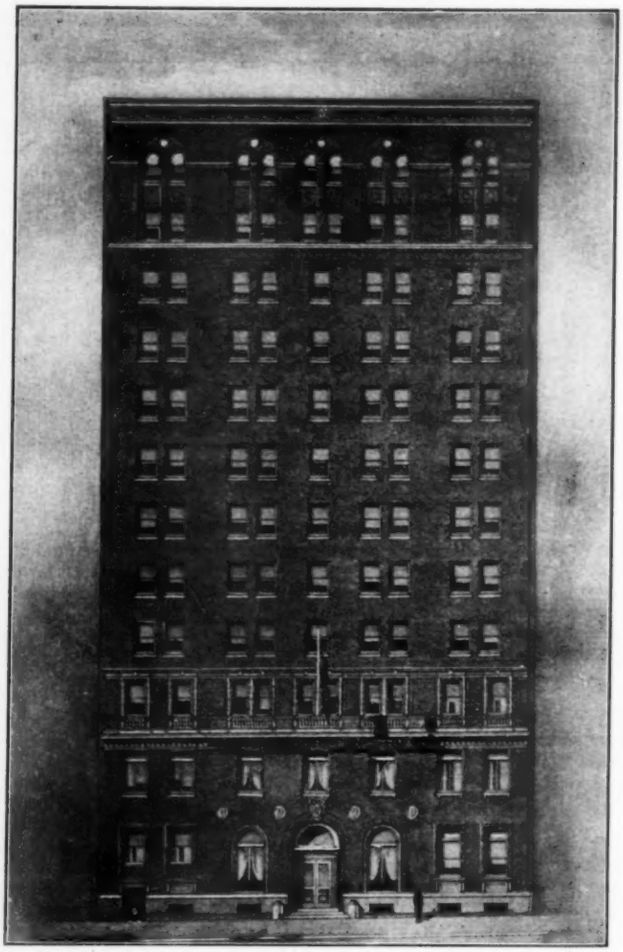
Servants	₱100.00
Laundry	45.00
Telephone	10.50
Lights	40.00
Ice and water	25.00
Petty cash	100.00
Dispensary (medicine and dressings)	50.00
Total	₱370.50 = $185.25

CHARLES H. HALLIDAY, M. D.,
Physician in Charge.

NEW HOME FOR NEW YORK NURSES

A $400,000 Building Under Auspices of the Y. W. C. A. Opened Its Doors May 1

The Central Club for Nurses of New York city opened its new $400,000 building at 132 to 138 East Forty-fifth street May 1. It is an imposing fourteen-story, fire-proof building. The facade is of Italian design, with a base course of granite, above which the walls are of red brick, with limestone and terra cotta trim, and is to take the place of the old club building at 54 East Thirty-fourth street. In the basement is the laundry, kitchen, filtration and refrigeration plants, and servants' dining room. On the first floor are club offices, safe deposit vaults, reception room, restaurant, cafeteria, and tea room, while the second floor has the library, rest room, committee rooms, offices, and an assembly and living room. From the third



Central Club for Nurses, New York City.

to the twelfth floor, inclusive, will be 218 single rooms and 18 of larger size. The thirteenth floor will have a roof garden, storage rooms, and lockers.

The club is a branch of the Young Women's Christian Association and the first of its kind in America. It was organized in May, 1910, under the auspices of the national board, with the indorsement of the New York County Registered Nurses' Association and the superintendents of the leading training schools for nurses of New York, its purpose being to provide central headquarters for graduate nurses which offers the freedom and advantages of home life. The club will not maintain a registry, as its object is purely social. The ethical side will be taken care of by the New York County Registered Nurses' Association, which will have its registry located in the building.

The underlying thought of the women who have worked so untiringly to secure this building is expressed in the following message by Mrs. Nathaniel Bowditch Potter, chairman of the committee of management, read at the laying of the cornerstone and a copy of which is placed at the very foundation:

"To the nursing profession, each member of the community, sooner or later, owes a debt of gratitude which it can ill afford to neglect, yet which it can with difficulty repay. As a token of appreciation and faith, the public offers to the nurses of New York city this building, with the affection of many friends and in the hope that it may long stand as a center of rest and refreshment to many generations of nurses; that within its walls they may never fail to find that physical rest, mental refreshment, and spiritual renewal so necessary to those who are called to give themselves unsparingly—and, when the call comes, recklessly—to those who suffer and who die. May the club ever hold before its members that high ideal of the profession which lays emphasis on the fact that its work is not a business, but a vocation, to which, when a woman is called, she dedicates not only her abilities and skill, but her character and life, with the true self-forgetfulness of those who serve. To look back across the years and to see many noble lives heartened for their task, standing as a promise of other lives to come, will be sufficient for those of us, both within the profession and outside of it, who have labored to bring this club into being, and to hold it true to its great Christian ideal, as its steadfast purpose, an unalterable vision."

ELEANOR J. CRAWFORD, Executive Secretary.

HOSPITAL ERECTS A NEW $250,000 PLANT

New, Modern Group to Arise From Ashes of Old Salem (Mass.) Institution

The Salem Hospital Corporation, Salem, Mass., has recently begun the erection of a $250,000 plant for the Salem Hospital, the old quarters of which were destroyed by the conflagration that swept the city on June 25, 1914. According to the Salem *News* the new hospital will consist of a large H-shaped main building of three stories and basement, a one-story operating pavilion, a two-story and basement domestic building, and a power house.

The main building is arranged to accommodate all of the patients of the institution under one roof. Administrative offices are grouped about the main entrance.

Also in the first story are situated the surgical wards for men and women. In a like manner are provided two wards for medical cases in the second story and two isolation wards and a children's ward.

A complete maternity department and a well-equipped private ward department will occupy the third floor. Interns' quarters are designed in the attic or roof story, but will temporarily be assigned to nurses until such time as the nurses' home may be erected.

The hospital will offer accommodation to 20 private patients, occupying single rooms with closets and several with private bath and fireplaces; to 44 semi-private patients occupying small wards; to 20 male ward patients; to 20 female ward patients; to 19 maternity cases; and to 11 children; making a total of 134 beds, and in case of emergency about 25 additional beds could be accommodated without any structural changes, making a total capacity of approximately 160 beds. The basement of this building contains the out-patient and x-ray departments, the pharmacy, pathological laboratory, plaster room, patients' clothing rooms, and sterilizing room, and provision for future hydrotherapeutic and Zandar departments.

The matter of orientation has been carefully considered and the building so placed as to insure exposure to sunlight on all sides during a portion of each fair day. On the side opposite to the approach with a southerly exposure the walls of the building will form an open court, with a grass terrace, and about this court on the several stories are to be airing balconies ingeniously arranged to afford facility for outdoor treatment of patients with the minimum loss of sunlight to the adjacent rooms.

The doors throughout are arranged to be of sufficient width to permit the moving of patients in their beds.

Each ward has its separate service room, diet kitchen, convalescents' dining room, toilets, bath rooms, blanket warming closet, linen closet, medicine closet, etc., and provision even has been made for the arrangement of flowers received by patients.

In the surgical wards and in connection with the private wards rooms will be assigned for surgical dressings, and in the isolation wards there is the facility for sterilizing all dishes used by the patients.

This building is to be substantially of fireproof construction throughout, as indeed are the other buildings. The elimination of wood finish has been carried so far that the doors and windows only will remain. The fireproof floors will be covered in general with linoleum and the sanitary hospital bases are to be of granolithic; in the utility rooms the floors and bases will be of terrazzo.

Adequate egress will be provided by inclosed staircases of fireproof construction, and the building will be equipped with elevators of a size to accommodate beds or stretchers. A system of electric illumination and electric signal systems and a complete telephone system are incorporated in the design, as well as modern heating and ventilating and plumbing.

A one-story building adjoining the ward building, and with its floor at the basement level, will contain a complete operating unit, with all its various essentials, and also a separate and complete accident department, mortuary, and autopsy in the basement.

Beyond and at a still lower level the domestic building is advantageously placed, and is to be connected to the other two buildings by a service corridor at the basement level of the ward building, through which food and laundry may be easily trucked and patients from the ambulance entrance and operating department readily carried. This building will house all the men and women domestics, and contain a laundry and a central linen storage room for the hospital. The kitchen, bakery, diet class room, cold storage and dry store room, and vegetable and fruit cellar are also to be distributed in this building, and on the second floor separate dining rooms for the house officers, nurses, and men and women domestics will radiate about a central serving room.

The power plant will be connected to the domestic building by an underground tunnel for passage of pipes. In

connection with this building is to be constructed a coal pocket, located below grade and easily filled with fuel.

The exteriors of the buildings are designed to conform to the architecture of the colonial period, many fine old examples of which still exist in Salem. Eastern water-struck red brick for the walls and slate roofs are to be used.

NOTES ON CONVALESCENCE

Burke Foundation Issues Memoranda on Character of Cases That Do Well—Occupation in Convalescence

Dr. Frederic Brush, superintendent of the Burke Foundation, White Plains, N. Y., has recently sent out two notes on convalescence that deserve very careful consideration by the hospital people—one on cardiacs and the classes of these cases that do well, and the other on occupations for convalescents.

The first note was sent to certain sources of the Foundation's patients, mostly in New York city, and the second was sent to employees of the institution at White Plains and to many physicians, social workers, nurses, and a large list of persons interested in occupation for the sick. The notes are self-explanatory and really need no introduction:

NOTES ON CARDIAC CONVALESCENCE

The Burke Foundation has convalesced over 200 patients suffering from organic heart disease since May, 1915. This number does not take account of many patients with complicating myocarditis, etc., as after typhoid and pneumonia.

The average stay for cardiacs now figures about four weeks, but this is made to appear too low by the certain number that fail to do well and are sent back during the first few days, or must go home for various family or social reasons. We plan to keep each cardiac, whenever we can see continuing good results, well over four weeks.

Our results with the 50 cardiac boys convalesced at the Mount Vernon Branch have been most excellent, judged from every viewpoint. With adults it is a story of about twelve relapses, and several other instances of slight or no gain.

Large numbers of cardiacs of various kinds press us constantly for convalescence. Many of these would not, for various reasons, enter on that most satisfactory long-term training as formerly given at Sharon. We are extending this greatly needed and varied cardiac convalescence as safe ways open ahead, knowing the little help there is elsewhere at present.

Right selection of patients is of first importance. The following groupings of feasible patients for us approximately indicate the results of experience thus far:

1. Boys, 10 to 16 years, and even with fairly serious lesions and conditions.
2. Adults in whom the heart disease is not the main convalescent need, and whom we may otherwise restore. (A large and important class, and generally refused access to convalescent homes.)
3. Cardiacs who tire frequently on their jobs, without tendency to early decompensation. (Preventive, as with men from Sharonware shops, etc.)
4. A most carefully chosen small number recovering from acute attacks (and after long stay unrelapsed in hospital or home), who, for special reasons, give firm hope of not relapsing in the peculiar conditions of the standard convalescent home.

Thirty selections made by Dr. Guile through the Bellevue cardiac class have been almost wholly successful, indicating right cooperation. Do not send patients fresh from acute attacks. (Longer in hospital or in home, or in care of a cardiac class, seems best at present.) Do not send the very old, nor those in whom the pronounced neurotic or temperamental element would prevent successful and prolonged stay under partially enforced occupation—therapy, etc.

Only a limited number of cardiacs, at most, can well be placed in the general convalescent group (for well-known reasons), and suitable applicants may thus have to be declined very frequently.

Long-term follow reports to us on cardiacs convalesced here will aid in determining right convalescent methods.

PATIENTS' OCCUPATION AT THE BURKE FOUNDATION

First, we wish to keep constantly in mind that patients' occupation is but part of essential treatment, and not to be thought of as adding to our money or equipment. This viewpoint should be persistently impressed on the patient also. In certain cases occupation may be enforced here as a prescription. It is rapidly coming that no convalescent institution can afford to be without this organized therapeutic occupation and recreation.

Patients for occupation will be chosen generally by the superintendent and the nursing department. The nurses in the cottages are in position to aid greatly in making suggestions and selections, because they have the most intimate knowledge of the patients.

The following kinds of patients most need work cure: cardiacs, the various neurotics (including thyroid, drug users, etc.), the inherently restless, those asking or wishing it, persons who have been here or in other convalescent homes before, long-stay surgical dressing cases, and any patients that are to remain here long. In fact, our occupation will turn largely on the patients who stay longer than two or three weeks. Nurses may also help much by reporting to the directress and superintendent the results, good and bad, of our occupations.

Selections, suggestions, etc., of patients for occupation are to be referred through the directress, within whose department our occupation is placed.

The occupation manager will have actual directing of the various occupational activities. She will cooperate with the directress by reporting vacancies and opportunities in the various occupational shops and fields, and will become skillful in reporting back instances of patients not thriving in the work, etc. She will keep accounts and records of the occupation work and will report the need of supplies, equipment, etc., to the directress or to the assistant superintendent, as the directress desires.

The superintendent may, of course, direct patients at any time to various occupations (as to grounds upkeep, etc.), or send patients away from occupation. All occupation matters may be referred directly to him, or to his assistant in emergency, or in the absence of usual heads.

The Burke Foundation is being carefully observed and looked to for most important pioneering in this new health-building field (work cure for short-term convalescents), and we would ask every employee to cooperate in this right effort.

There are plans to extend our occupations from time to time (as into gardens, further salable shop products, etc.) Let it be constantly remembered and widely made known that any funds coming from the sale of occupation products will be entirely applied to the further health upbuilding of more convalescents in this vicinity.

MINIATURE WAR HOSPITALS

Red Cross Shows European Battlefield in Campaign for New Members—Edward A. Moose, of the Atlantic Division, Tells the Story

About all that many persons know regarding the appearance of a battlefield and the subsidiary factors, such as hospitals, camps, etc., is what they are able to gather from such terms as "sector," "terrain," "Hill No. 1," "curtain of fire," etc. It has remained for the American Red Cross to produce a battlefield, with hospitals, camps, etc., in miniature, so that even the most unmilitaristic layman can visualize, not only the tremendous movements of troops and the characteristics of modern fighting, the terrible loss of life, but also the methods of construction and location of the various hospitals erected to alleviate the suffering and terrible loss of life which are now taking place on the battlefields of Europe.

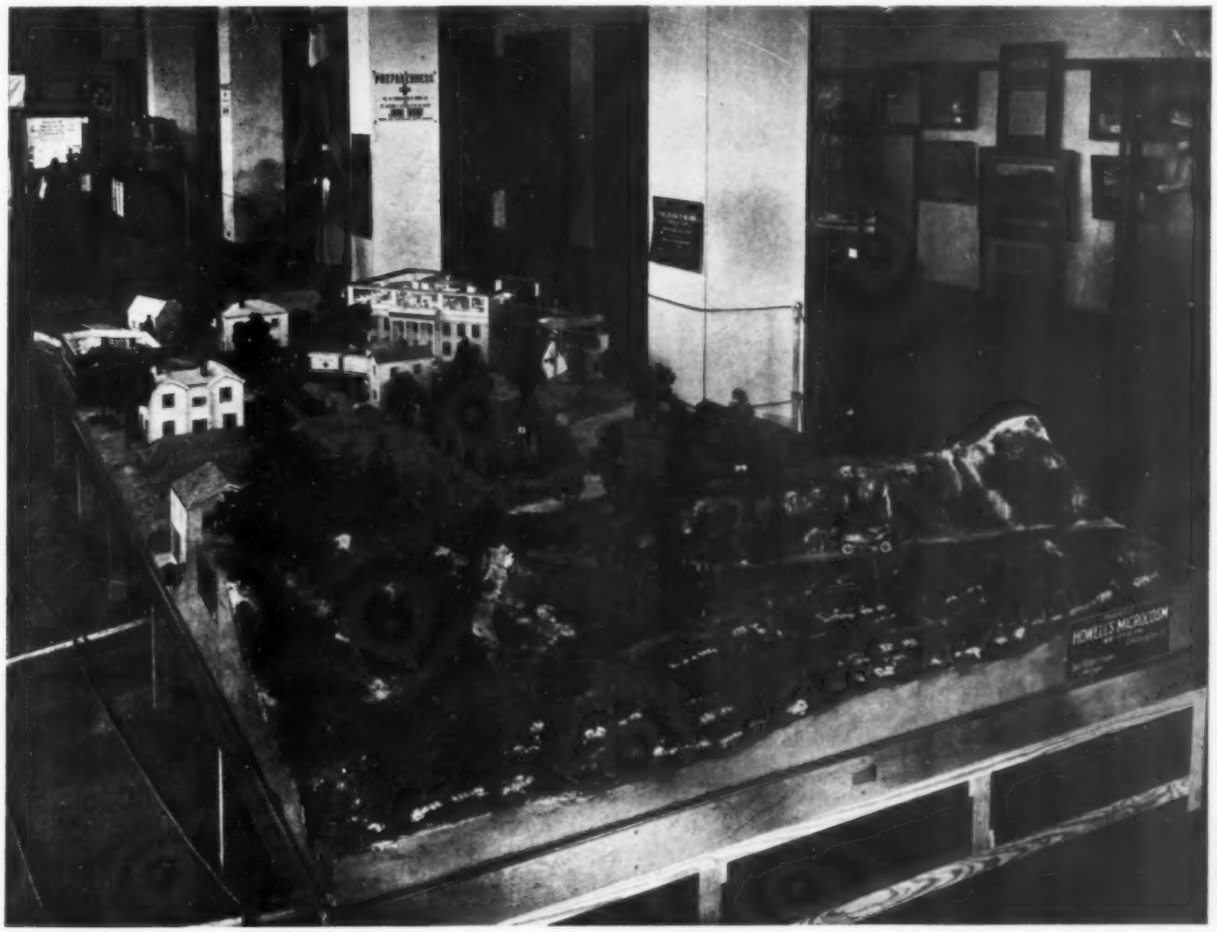
It is quite significant, when one thinks of the tremendous daily cost of war, variously estimated at from

$50,000,000 to $100,000,000 a day, that into the Red Cross model has gone thousands upon thousands of dollars, perhaps even millions, of retired and macerated currency. This miniature battlefield is only 10 by 25 feet, and was constructed by a Washington firm, being made up of old retired United States currency, which was ground up into a putty-like pulp, mixed with glue, forming a peculiar kind of papier-mache, which, when hardened, makes an extremely durable model.

This model was constructed under the direction of army officers, who declared it to be an exact reproduction in every detail of modern methods used in the relief of suffering and in the mitigation of the horrors of war through the Red Cross. It is rather curious that, while the general plan of the model was under the direction of army officers and army surgeons, some of the most important details of trench life were contributed by Mr. Ernest P. Bicknell, director of civilian relief, American Red Cross, who spent considerable time last year in Belgium and who studied trench warfare on the ground. The model is on exhibition at 411 Fifth avenue, and is one of the chief features of the campaign of the Red Cross for 100,000 members in the metropolitan district. One might call the model a "section." Whether it is one or not, one can by looking at it get an idea of a battlefield of the kind referred to in the news dispatches from the western front in France. In the background, which represents a distance of several miles in the rear of the battlefield, is an area consisting of an encampment of hospital tents, covering operating apparatus and rows of cots for the injured and quarters for the surgeons and nurses. It is to this safe spot that the wounded are transferred from the first aid station to the Red Cross in the immediate vicinity of the rear trench. It is here that no shells can reach them, and flags of the Red Cross float from a towering pole.

Then there is a third section of the model, which shows a base hospital that may be a hundred miles from the firing line. A number of buildings have been taken for use as homes for the physicians and nurses. A school house three stories in height has been turned into a hospital and a warehouse is used as a place for making surgical dressings. It is the kind of a plant the American Red Cross would set up in America if war should unfortunately gain a foothold on our shores. In the foreground are the rows of trenches, with troops lined up in them, firing at an imaginary enemy, also hidden in an imaginary trench located at about the point occupied by the spectator. There are the earth and timber roofs over parts of the trenches intended to protect their inhabitants from shells and fragments of shells. A miniature soldier stands at the telephone, communicating with the batteries of three-inch guns located behind the crest of a hill rising in the rear of the trenches. He is giving ranges. The wire is seen laid along the bottom of the trench and through the crooked trenches joining it with other lines of trenches in the rear.

The guns are delivering a "curtain of fire," dropping a series of shells on the main line between the trenches



Red Cross miniature battlefield.

of the two armies in such a way as to prevent the enemy from passing over. Unfortunately, the enemy also has been able to do damage, if one may judge from the prone figures of soldiers scattered here and there, the smashed dispatch automobile with its wounded passengers, the crumpled and shrapnel-riddled aeroplane on a hillside, and the dead horses and disabled guns further to the rear. The "curtain of fire," however, is not to be given up because of this last-mentioned misfortune. Another gun is dashing up.

This model has been constructed on a scale of half an inch to a foot, and, with the aid of a little imagination, you can picture the turmoils of battle, the agonies of the wounded, and the efficient and commendable work of the Red Cross surgeons and nurses, and their heroic service in the battlefields of Europe.

HINTS FOR HOSPITAL SUPERINTENDENTS.

If some of these items that enter into the troubles of the junior intern about this season of the year could be presented to him in a friendly sort of way by a friendly administrator, it would probably save the young man some bad half hours and incidentally tide him over one of the most difficult places in his career. We who have traveled farther than he along the rough world paths owe a good deal to this young man, not the least of which is to try to save him from himself and to bring him to real manhood's estate and manhood's obligations and responsibilities without a stain on his brief history page for participating in a riot or conspiracy in the hospital.

A doctor connected with a Salt Lake City hospital recently conceived the unique scheme of sending in a false alarm to his hospital for an emergency operation. He laid all the wires, had a number of friends present to see the test, and then sprung the surprise. He picked up the telephone in his office, called up the hospital and informed the telephone operator that he was on his way to the hospital with a patient, that the patient had a gunshot wound, and would require an abdominal operation. Then he and his friends quietly walked over to the hospital, found that things were ready and nonchalantly complimented the institution on being able to get ready for a surgical operation so soon; it took twenty-eight minutes. This seems to us an incredibly long time to get ready for an emergency operation in a modern hospital. This Salt Lake doctor thought it was a real sprint.

How many hospitals are there in which it would take twenty-eight minutes to get ready to receive an emergency patient with a gunshot wound, and what do we mean by "ready?" And why are we not always and instantly ready? It ought to be possible to boil the instruments while the patient is being anesthetized and scrubbed, and the boiling of the instruments seems to us the only excuse for delay of any sort—for even a minute.

Before we agree to put in a new device and certainly before we order it, and before we agree to accept any material in our hospital building processes, we ought by all means to know the story—that is, the past history—of that material or device. There are some pretty live wires in the commercial side of the hospital world, and they are offering us new devices every day and new materials. About 10 percent of the time their offerings are worth while; about the other 90 percent they fall down because the inventor saw the manufacturing side only and did not know the hospital angle of the thing in which he was interested.

It is well enough to try experiments if we do so with the definite knowledge that they *are* experiments, and if we have the money to spend on them, and if they are not so interwoven with permanent and valuable things that it would be an extremely expensive thing if they were to fall short.

Those of us who have money to pay for experimental work, and who are ambitious to have the newest and best things there are, should do the experimental work with new devices and new materials. The rest of us had better find out, before accepting a thing, where it has been used, the conditions under which it was being used, and the satisfaction it was giving, not to the manufacturer, but to the hospital administrator, who, in a final analysis, is the person to pass on the justification for it.

Spring is coming on, and, while nature is getting ready to use the paint brush and the green colors on her floors, and the blues in her ceilings, and the high lights in her flowers, the hospital superintendent must think about doing a little painting on his own account. Naturally, the question comes up, what are we going to do about it? Are we going to do as we did last year and the year before and the year before that—buy cheap paints that check and crack and curl and come off with the first washing, or are we going to analyze this paint problem a little bit this year and do differently?

For an average room it takes probably a couple of gallons of paint. This paint costs all the way from $1.50 to $3 a gallon, so that the difference in price between the best and the worst would be about $3 for the room. Now, what is the other difference? Let us figure on the labor a little bit. If we put on two coats, it will take two men about two days. The average pay for a painter is about $4 a day and for his assistant $2.50, or $13 in labor for painting the room. A room while being painted is idle about five days. If we are willing to put the patient in while there is still a strong odor coming from the undried paint, we can get him back in four; but let's call it five days. The price of the average private room in the average hospital is about $20 a week, or $3 a day. That room, lying idle, costs, say, $15, so that it has cost us $28 to paint that room, and $3 for the paint makes a total of $31. About three months after this $1.50 paint is on the wall it is in such shape that we are beginning to be ashamed of it, and in six months we must renew it and spend another $31. If, in the first instance, we used the best paint we could buy, it would last easily a year, and with decent care it would last two years. A good paint would have originally cost $5 or $6, the labor would have cost $13, and the idleness of the room would have cost $15, or a total of $33. With a poor paint it would have cost $62 if we had to do it twice as often as with the good paint, and $124 if we had to do it four times as often.

All this does not figure up so large an amount of money for one room, but, if we multiply that one room by the total wall and floor space in the hospital and the total number of beds occupied by patients, for which we get money, we will find that the whole totals up a pretty considerable amount if taken off the interest on the endowment fund.

More than a thousand patients at Bellevue Hospital, New York city, recently witnessed from balconies and porches a circus performance given on the grounds of the hospital for their benefit. The circus program is an annual affair at Bellevue.



ST. JOHN'S HOSPITAL, CLEVELAND, OHIO
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WITH APPARATUS *MADE IN ITS OWN FACTORY*



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STERILIZERS
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GLASS, RUBBER, ENAMELWARE
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It will supply your Architect with roughing-in measurements for the necessary piping for Sterilizers, Built-in Cabinets, etc., etc.

This is the kind of Service supplied to St. John's Hospital

TO SUM UP:
EXPERT SERVICE, GRATIS
COMPLETE EQUIPMENT
GOODS OF OUR *OWN MANUFACTURE*
OF ONE QUALITY
OF SYMMETRICAL DESIGN
OF UNIFORM FINISH
ON ONE SHIPMENT
ON ONE BILL

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The oil which meets all these requirements is

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Please the palate of the sick and convalescent patients in your institution. Cream of Rice will delight them.

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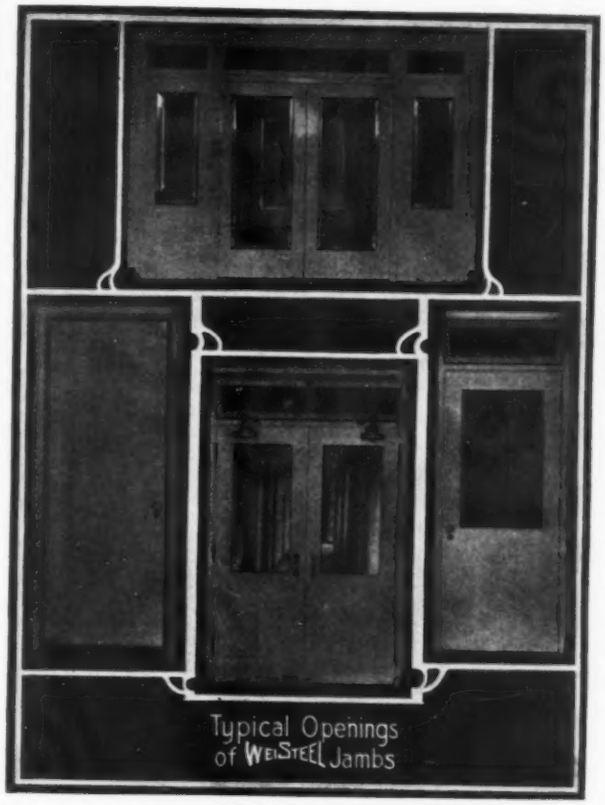
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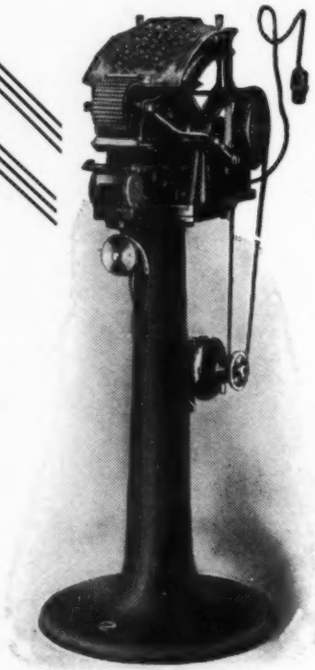
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The purpose of this advertisement will be accomplished if you will use

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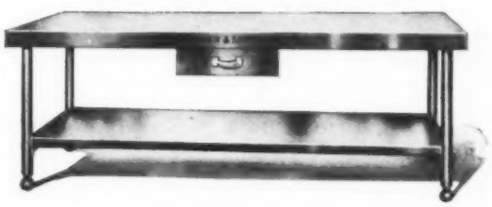
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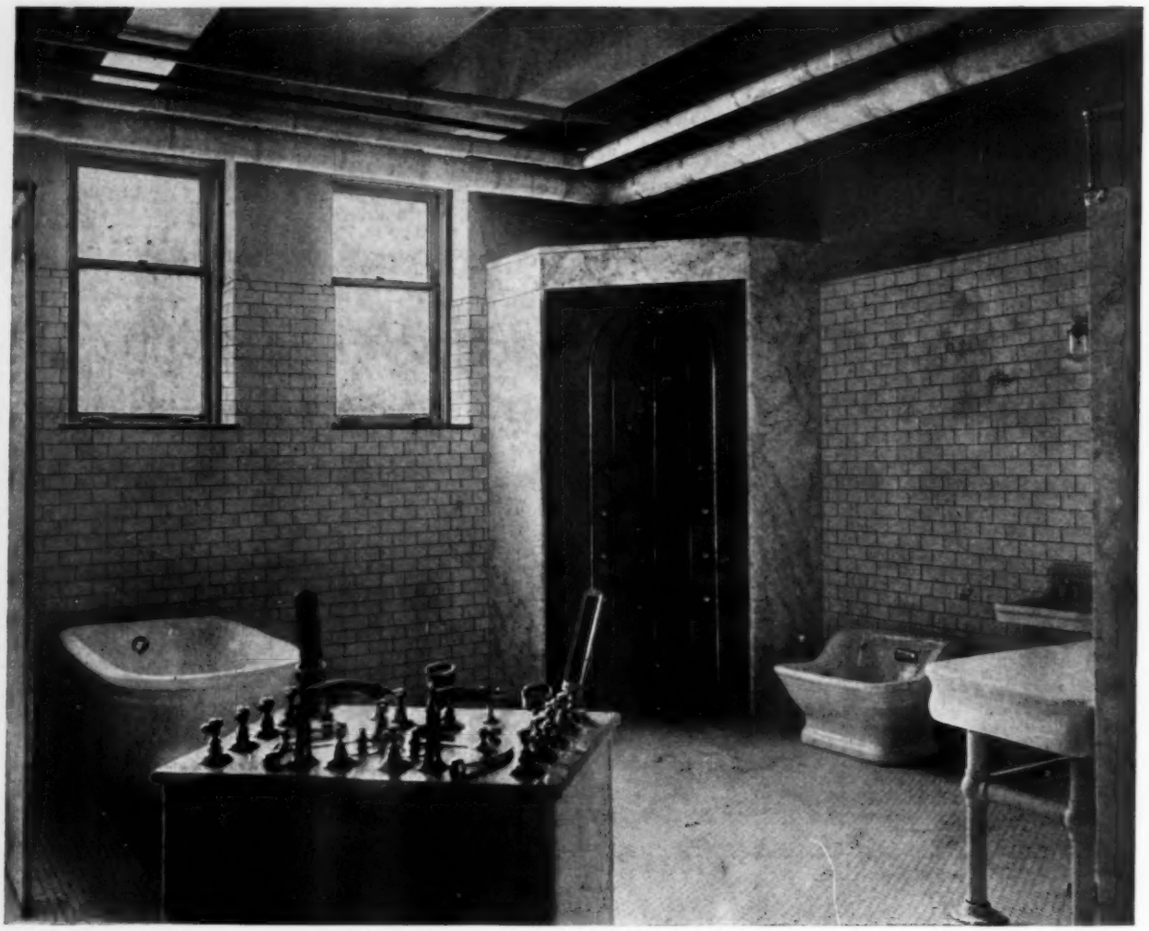
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Let me send you samples and prices

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Thoroughly clean out the intestinal tract.

Give nourishment composed of food elements capable of being absorbed with minimum digestive effort.

A diet that meets the condition is prepared as follows:

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(Composition—maltose, dextrins, proteins and alkaline salts)

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Feed small amounts at frequent intervals

As soon as the stools lessen in number and improve in character, gradually build up the diet by substituting one ounce of skimmed milk for one ounce of water until the amount of skimmed milk is equal to the quantity of milk usually given for the age of the infant. *Do not give any milk fat until the baby has completely recovered.*

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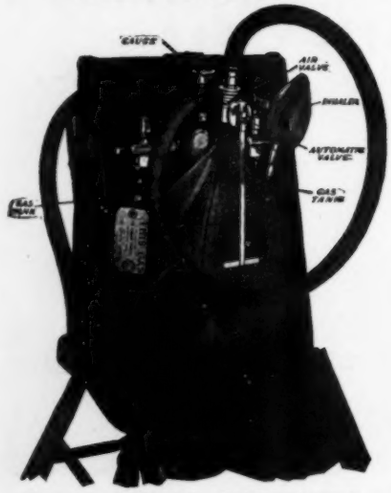
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and we know of none quite so good as
our "Aseptic"—
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do **you** know of any better than those
we have been making these 30-odd years?—
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'always works and never leaks' and with
always dependable, perfectly soluble tablets—
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SHARP & DOHME

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"Quality Products"

McKESSON'S *BABY GRAND* FOR OBSTETRICS

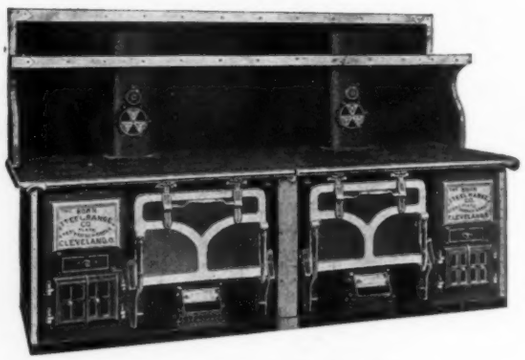


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RELIEVES the pain in labor without weakening the contractions or the loss of consciousness. It requires no greater skill than to apply the mask and have the patient take as many breaths at the beginning of each "pain" as is found necessary to relieve the suffering; usually 3 breaths is the dose. No valves to bother and no waste of gases between "pains," yet always ready for each "pain" until the baby is born. ***"Analgesia in Obstetrics" pamphlet sent on request***

TOLEDO TECHNICAL APPLIANCE CO., Toledo, O.

See also our ad on page 78



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THEY have been developed through long experience and study of hospital requirements. Would it not be well to take up your problems with people who know because they have been doing such work for many years? Large and complete facilities. Plenty of references.

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You can't buy a better Sterilizer

First

A thorough Bed-Pan cleanser for every-day, all-day use.

Takes the filled pan —empties it—washes it—steam cleanses its surfaces—disposes of the odors—all in a few seconds.



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For emergency work, infectious cases, facility is provided for not only cleansing the pan thoroughly, but for sterilizing the contents by boiling before delivering to the waste line.

Thoroughly cleanses a pan in two minutes.

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All kinds of Sterilizers and Bacteriological Apparatus

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Please send information about Castle Bed-Pan Sterilizers.

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The DeCanio Telescopic Support and Portable Stretcher



This Method of Keeping Cadavers

is being given preference by many of the leading hospitals and institutions, because it represents the highest type of efficiency and is most sanitary.

It can be easily installed in any style of refrigerator and is rapidly replacing the inefficient, unsanitary wooden makeshift. The support and stretcher are both constructed entirely of metal, and thoroughly galvanized after the parts have been assembled.

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"TURNS DOWN YOUR ELECTRIC LIGHT"

5 CHANGES — SAVES CURRENT
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Pulling the cord adjusts the light.
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Attaches to any socket.

Write for Bulletin Z

WIRT COMPANY
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Socket is driven tight into bedpost. The pin of caster fits into socket.

Heron Hospital Casters

THE Heron Big 3 Caster is a specially designed Hospital and Institution Bed Caster, and is scientifically constructed. The needs of the institution, the comfort of patients, and conveniences for the attendant are all provided in this Heron Caster.

Genuine Ball Bearing
Noiseless in Operation
Harmless to Polished Floors

HOSPITAL CASTERS WITH EXTENSIONS



To elevate bed, raise bedpost to the desired height and insert cotter pin.

A FAMILIAR object in the surgical or emergency ward is the "shock block." The Heron Big 3 Caster with the **16-inch extension** takes the place of the clumsy, inconvenient, and dangerous "shock block." For convenience, reliability, and safety, there is nothing that equals the **Heron Extensions.**

The **Extension** is always in place, ready for service. Easy to elevate—easy to operate. The bed can be moved about in the elevated position as readily and safely as when lowered.

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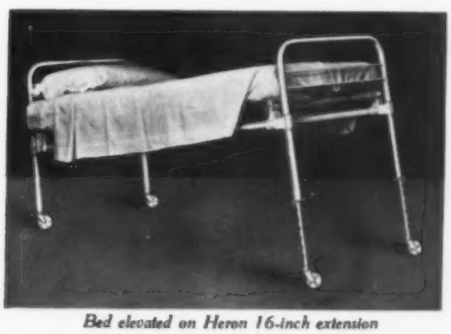
A descriptive catalog will be sent on application

Heron Manufacturing Co.

Hospital Supply Department
UTICA NEW YORK



Bed as lowered

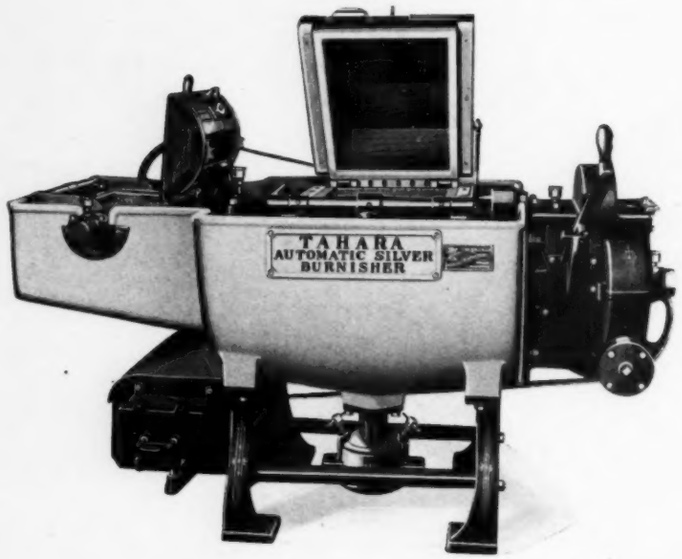


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a necessity for the Modern Hospital



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In Use—by over 200 of the largest and most prominent purveyors of food in the United States.

Effects—thoroughly burnishes all silverware—both inside and outside of hollow-ware, such as cream pitchers, tea and coffee pots—where it is impossible to reach with the hand cleaning method.

Economy—cuts down replating bills to the minimum—prolongs the life of your silver—saves time—saves labor.

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POSITIVELY SANITARY

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GELATINE DESSERTS

Are Uniform in Quality, and Delicate and Delicious in Flavor

Made of the Purest and Finest Gelatine, True Fruit Flavors, Granulated Cane Sugar, and Citric Acid.

5—Popular Flavors—5

Lemon — Orange — Cherry
Raspberry — Strawberry

Other Flavors to Order

Also the Plain Gelatine Dessert, without Flavor

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Nothing need be added to the Flavored Gelatine Desserts but the proper quantity of hot water.

We supply also the Pure Gelatine of Finest Quality without the other ingredients.

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Protect Your Patients From Germs



We make tables to fit any space. Let us submit plans.

By washing your dishes with a

Fearless Dishwasher

It makes you absolutely safe from danger of germs being carried by unclean dishes, because the water in the rinse is kept fresh and clean by a forceful, continuous flow.

Perfect sterilizing is assured by the dishes being in water 180 to 212 degrees.

Our 1916 Fearless Dishwashers

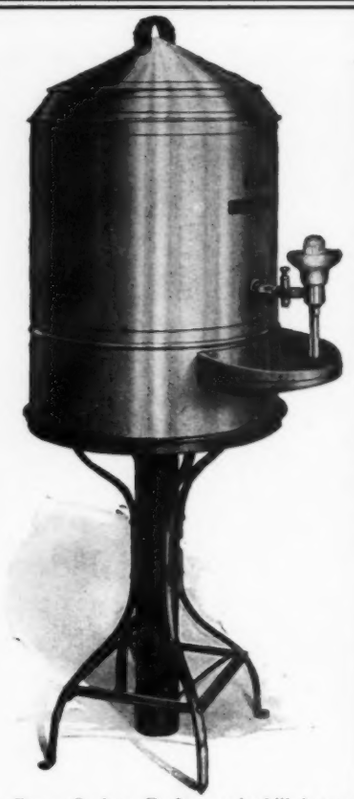
have a variable motion that produces 40 percent greater agitation of the water against the surfaces of the dishes than ever before attained. Thus you are assured of your dishes being thoroughly cleaned, and your patients protected from infection.

Our Illustrated Catalog

shows our complete line of Hand and Electric Power Dishwashers. Write for a copy today. We send it FREE

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The Barron Sanitary Cooler cuts ice bills in two—is made in six sizes and finished in several colors. Our free booklet will tell you all about it.



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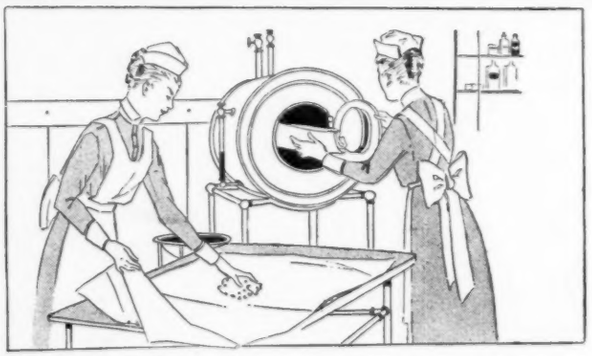
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for all cases where absolute accuracy of dosage is required. The present tendency toward concentrated solutions makes an instrument of precision vitally essential to the modern practitioner. The VIM Micrometer Syringe can easily be read to one hundredth of a cubic centimeter. Indispensable in tuberculin work.

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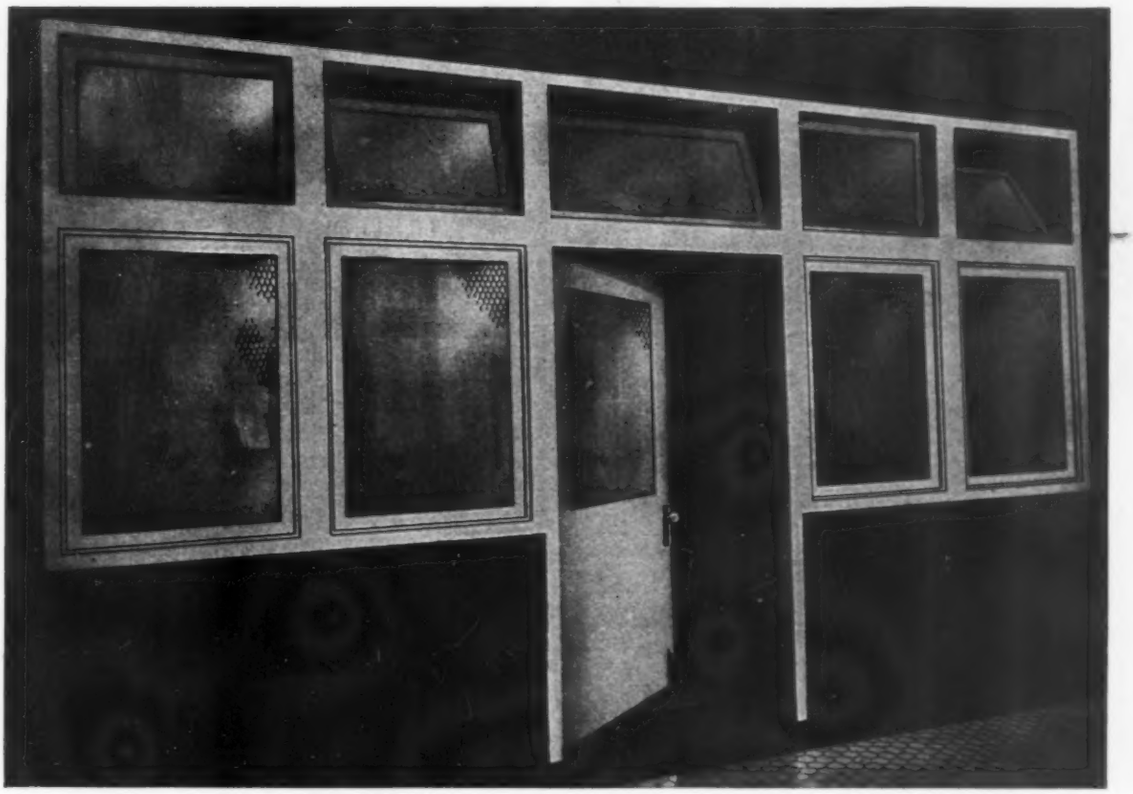


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THORP FIRE PROOF DOORS

MAKE EACH ROOM A SEPARATE BUILDING

STAIRWAYS should always be protected. Whatever you do, protect the passages from floor to floor. The illustration shows the Thorp way of perfect protection, without reducing light area or ventilation.

This is a visible evidence of the care taken to protect the patient, and immediately instils confidence in the other functions of the hospital. Thorp doors and frames are fire proof, attractive, economical, clean and sanitary. "Thorp doors are designed to keep the fire confined."

THORP FIRE PROOF DOOR CO.

MINNEAPOLIS, MINN.



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Aside from its own inherent nourishing qualities,

COOK'S *Imperial*

Extra Dry

Champagne

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It is a necessity in many cases.

Cook's Imperial is the absolutely pure juice of the finest grapes, fermented in the bottle.

It is superior in quality to foreign wines, and costs less because there is no expense for ocean freight and import duty.

The very reasonable price enables all hospitals to administer it when needed, and pay patients can well afford to use it freely.

The wise hospital superintendent carries Cook's Imperial in stock.

The American Wine Company
St. Louis, Mo.

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Occasionally breast-fed babies without apparent reason show a steady loss in weight and strength. Intelligent investigation usually lays the blame to faulty diet.

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EAGLE
BRAND
CONDENSED
MILK
THE ORIGINAL

on account of its wholesomeness, palatability, uniformity of composition, as well as ease of assimilation and simplicity of preparation, will be found by clinical trial to be of great value in these cases of impaired nutrition.



Send for Samples, Analysis, Feeding Charts in any language, and our 52-page book, "Baby's Welfare." Mailed on request.

Borden's Condensed Milk Company
Established 1857
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Those New "Bran Foods"

A new bran food is born every week. The appearance of these bran foods indicate two things: (1) recognition of the need of food laxatives instead of drug laxatives; (2) the value of wheat bran as a stimulant of natural peristalsis. The problem of presenting bran to the human stomach in combination with a nutritious, easily digested food was solved twenty years ago by the invention of

Shredded Wheat Biscuit

the food that supplies all the body-building material in the whole wheat grain in a digestible form. In this food the bran is retained and presented in such a way as to promote bowel movement in a healthful way without irritating the intestines or interfering with digestion. We are always glad to send samples of this product to physicians and heads of hospitals and sanitariums.



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Made only by

The Shredded Wheat Company

Niagara Falls, N. Y.

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PURE WHITE, FLAWLESS — The Light Without the Glare



S-744D—6-inch diameter. Also made 8, 10, 12 and 14 inches in diameter

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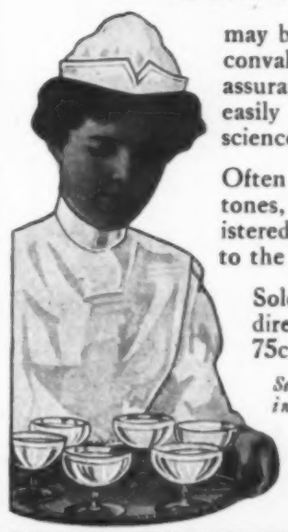
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A Nourishing Food and a Delicious Dessert

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Junket

MADE WITH MILK



may be freely prescribed for invalids, convalescents and children, with the assurance that it is one of the most easily digestible foods known to science.

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Sold by druggists or grocers or direct by us to the profession at 75c per 100 tablets.

Send for interesting treatise, "Junket in Dietetics," and free sample

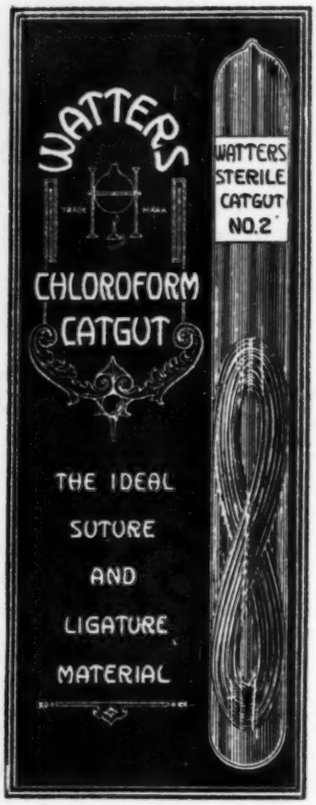
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Watters Catgut Is Based on Experience vs. Experiment

THE ORIGINAL CHLOROFORM CATGUT

Eliminate Danger

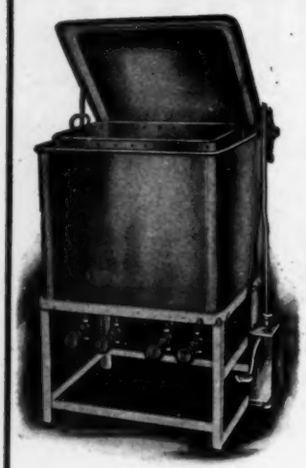


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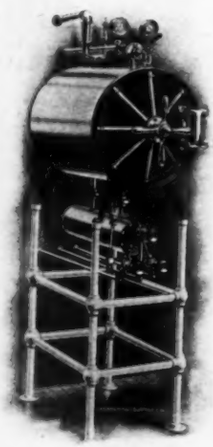
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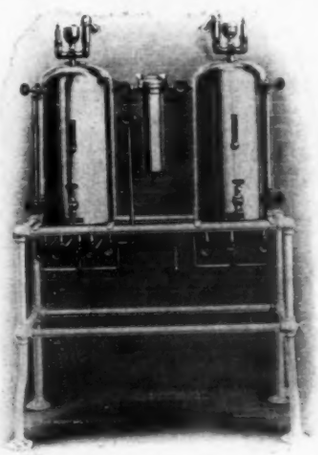
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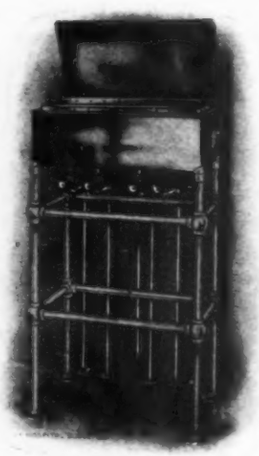
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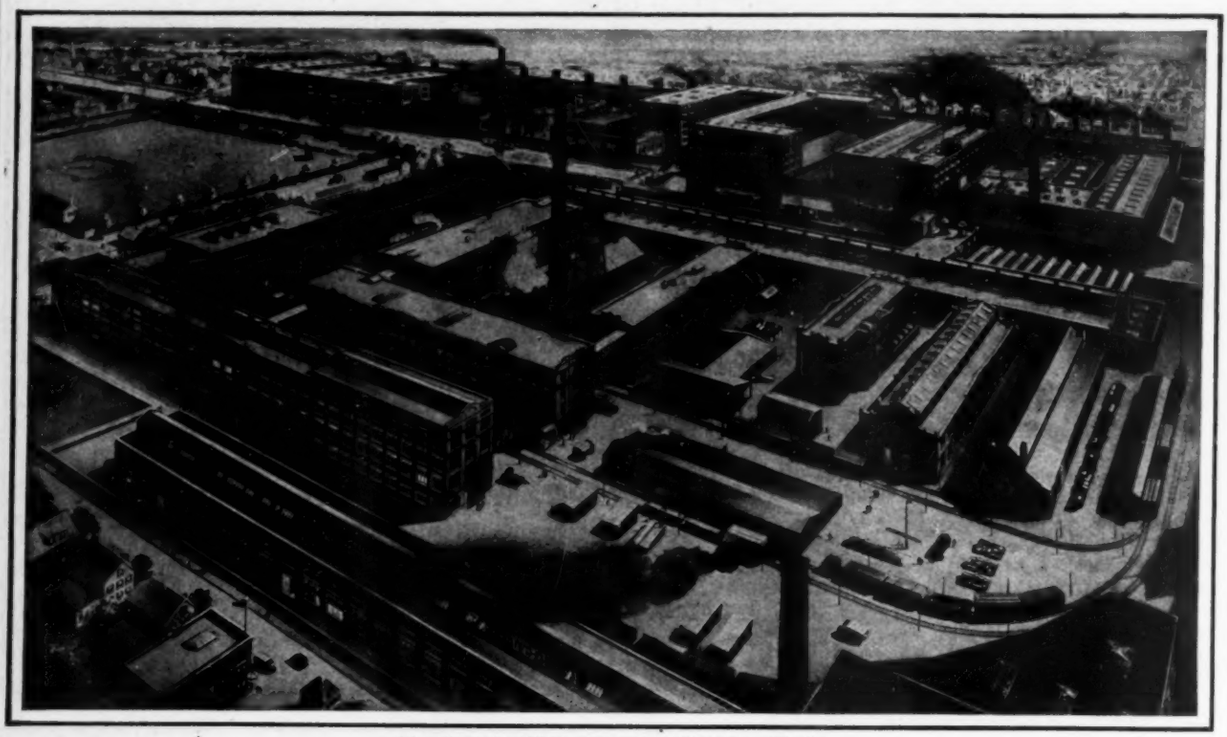
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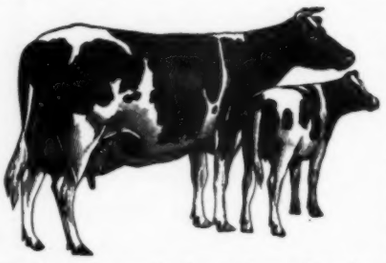
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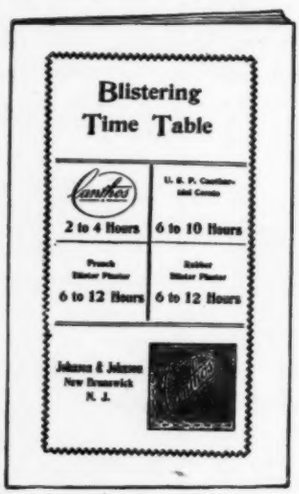
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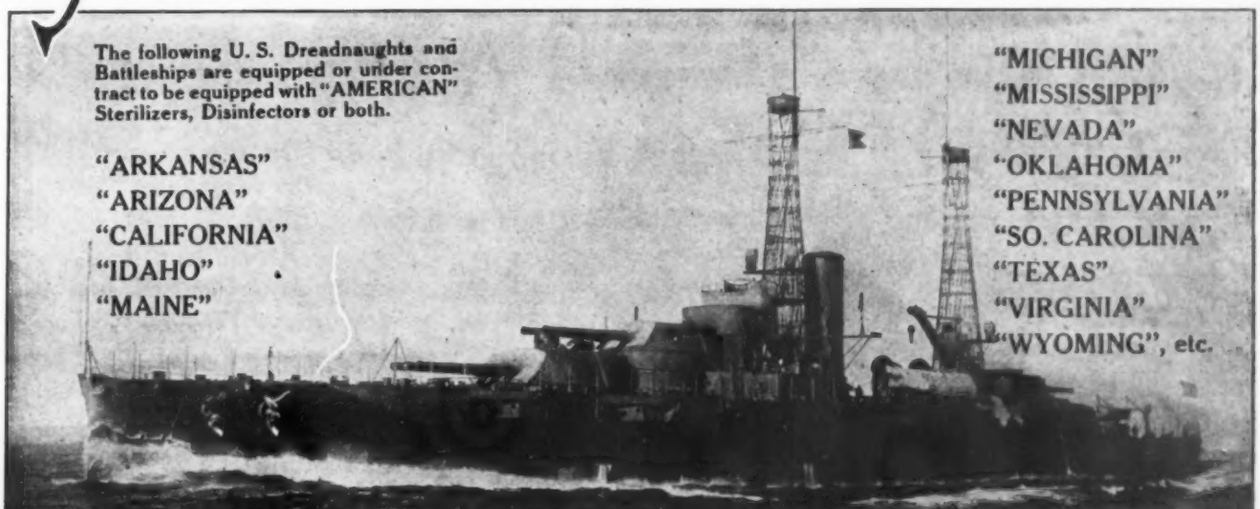
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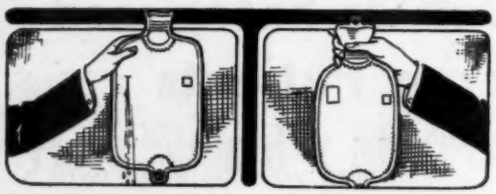
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is a universal demand. No hospital is properly protected in this vital particular unless equipped with

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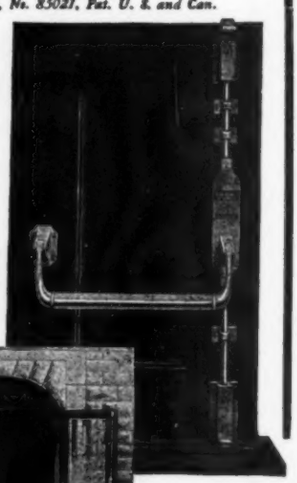
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They never fail to act. Instantly and always responsive to slightest push or pull on inside cross-bar. Constructed to outlast the building.

What a satisfaction it is to be free from fear of fire disaster. **Von Duprin** devices guarantee this protection. You expect to pay more for extra efficiency. **Von Duprin** Devices cost more because worth more.

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Reduce Damage to Floors and Floor Coverings

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When Simmons perfected light-weight steel tubing for beds, its use made Simmons Steel Beds weigh less. But this weight-reduction did more than make these beds easier to *lift.* It made them *roll* easier on their silent casters!

The reduction in weight, important as it is in actual pounds, is far more important in its secondary effect. For it permits Simmons Casters to turn *freely* in their sockets.

Thus, no matter which way the caster chances to be facing when the bed is moved, it swings around until its *axis* is at right angles to the line of direction and *rolls* forward naturally and silently.

Regardless of how the bed is pushed back and forth, this way or that, the caster automatically holds its correct position.

Old-style, heavy beds prevent casters from performing their natural functions. The casters become *weight-bound,* cannot swing into position and gouge across the floor, marring its surface and wearing rugs and carpets.

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Two New Nursing Appliances

A Sample of either, or both, of these Appliances will be sent on Approval to any Hospital in the U. S. Try for Twenty-Four Hours, and if not satisfactory return at our Expense

Non-Slipping Knee and Thigh Support and Foot Brace

Keeps the Patient from Sliding Down in Bed



Bottom View, Showing Non-Slipping Attachments

A Comfort-Giving Appliance Needed in Every Hospital



Patent Applied For

Supports and Rests the Knees
Fowler Position Obtained When Used with Back-Rest
Makes a Comfortable Head-Rest

Bed-ridden Patients invariably slip towards the foot of the bed, and lifting a patient up again means quite a little laborious work for the Nurse. The Meinecke Knee and Thigh Support prevents a Patient from slipping down.

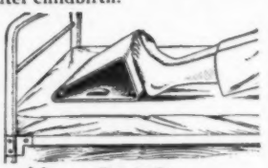
The illustrations on the opposite side show the many uses to which this Appliance can be put.

The Rubber Attachments on the bottom, which prevent the Knee Support from sliding on the bed, are corrugated and are detachable. The Support itself is made of light-colored, fine quality Veneered Wood, and is varnished all over with Valspar Waterproof Varnish.

Illustrations Showing How The Non-Slipping Knee Support is Used



No. 1—As a Knee Rest and Thigh Support — Prevents the Patient from sliding down in Bed. Gives a more comfortable position by flexing the knees, thus relieving all strain from the Spine and Abdominal Muscles. This makes it especially valuable after childbirth.



No. 2—As a Foot Brace— Prevents the Patient from sliding down. Also useful as a brace for the Feet when a Patient is eating, especially if he is holding the Tray on his lap.

No. 3—In Combination with a Back-Rest— Gives the required Fowler Position for Post Operative Work; also for Proctoclysis (Continuous Rectal Irrigation). For Convalescents it also provides a comfortable position for reading or writing.



Net Wholesale Price to Hospitals.....Each, $3.75

Non-Slipping Back-Rest with Pillow Holder

The Rubber Attachments on Bottom Prevent the Back-Rest from Slipping on the Bed



Closed, Showing Bottom View



Patent Applied For

Total Length, 22½ Inches; Total Width, 20½ Inches
Weight, about 7½ lbs.

The main features of the Meinecke Back-Rest are the Non-Slipping Attachment and the Pillow Holder.

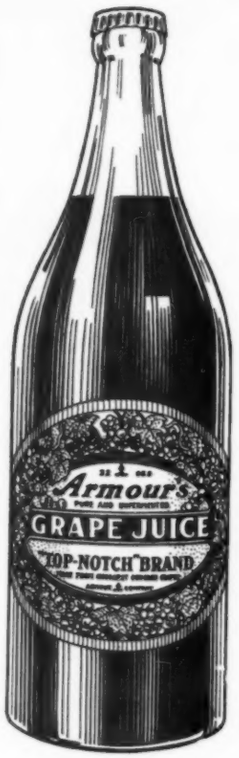
All other Back-Rests slip on the bed and slide away from the Patient. This is prevented in the Meinecke Back-Rest by the use of corrugated Rubber Attachments which are detachable. The Pillow Holder also prevents the pillow from slipping down, even when the Patient leans forward.

This new Rest is light, but very strong, and is easy to place under a Patient, and to adjust to the various positions. It is made of fine quality Veneered Wood, and is coated with Valspar Waterproof Varnish. It is neat, compact and durable.

The back portion is slightly curved, and the lower end is so made that there is no pressure on the end of the spine, no matter at what angle the Patient is lying or sitting.

Net Wholesale Price to Hospitals.....Each, $5.00

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Armour's Grape Juice is not diluted. It contains only the natural grape sugar.

All insolubles and suspended solids are removed by clarification.

These are the reasons why it can be safely prescribed.

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Chicago, Ill.

Armour's QUALITY PRODUCTS

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The waxed-paper bag inside the Jell-O carton affords absolute protection to the contents against moisture and atmospheric conditions.

It is air-proof and moisture-proof, keeping the Jell-O always pure, clean and sweet.

The Jell-O in every package is *fresh*, whether made yesterday or many months ago. It does not lose its flavor or grow stale.

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From start to finish the operation of "putting up"

JELL-O

is an interesting one. Wonderful automatic machines perform it—each completing a package of Jell-O in two seconds—from making the waxed-paper bag and filling it with Jell-O, to putting the filled bag and a recipe folder in the carton and closing and sealing it.

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NEWS OF THE HOSPITALS AND SANATORIUMS

Dr. C. L. Bury will open a hospital at Parker, S. D., about June 10.

Grace Hospital, Cleveland, O., is planning to rebuild and modernize its plant.

Mrs. Mary E. McNamara, a professional nurse, is building a hospital at Hartington, Neb.

The erection of a county tuberculosis hospital has just been started at Snohomish, Wash.

The New Rochelle Hospital, New Rochelle, N. Y., has recently opened a new service wing.

A new city hospital is nearing completion at Lakeland, Fla. It will have a capacity of 21 beds.

Miss Nellie Davidson, a local nurse, is reported to have opened a small hospital at Watsonville, Cal.

The Davidson County Asylum, Nashville, Tenn., has just completed a fireproof addition costing $75,000.

The County Hospital at Leavenworth, Kas., has recently opened a new 20-bed ward for insane patients.

The Norfolk State Hospital, Norfolk, Neb., has begun the erection of a women's building to cost $60,000.

The Harvey Hospital, Harvey, N. D., has recently passed into the control of the local Seventh Day Adventists.

The Ohio Valley General Hospital, Wheeling, W. Va., is installing a complete hydrotherapeutic department.

Plans are being drawn for an annex to Mercy Hospital, Altoona, Pa. The building will be erected this summer.

Construction work will soon be started on a new women's building for the South Dakota State Hospital at Yankton.

Construction work has been started on a hospital to be erected at Oatman, Ariz., by Drs. Stone, White, and Bowes.

Beth El Hospital, Colorado Springs, Colo., is seeking funds for the erection of an addition to cost about $50,000.

Dr. Roland Hazen, of Paris, Ill., recently completed a new $15,000 building for his private hospital at that place.

A 17-bed community hospital was opened at Hastings, Mich., May 10 in a large residence donated for the purpose.

Hope Sanatorium, Hastings, Minn., owned by Senator Millett, was burned May 11. All of the patients were saved.

Dr. Almo De Monco, of Los Angeles, contemplates establishing a cancer hospital somewhere in southern California.

A municipal hospital for contagious diseases will be erected at Wilkesbarre, Pa., this summer at a cost of $25,000.

A new hospital built in connection with the Children's Home at Sioux Falls, S. D., has recently been put into service.

The Faulkner County Medical Society, Conway, Ark., has inaugurated a movement for the erection of a county hospital.

A new private sanatorium is in operation at Swainsboro, Ga., having been opened by Dr. R. C. Franklin and Dr. Coleman.

Dr. A. F. Young, recently appointed superintendent of the Milwaukee Hospital for the Insane at Wauwatosa, is

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The ingredients of Royal Baking Powder are known the world over. In Royal Baking Powder the leavening gas is produced by the admixture of bicarbonate of soda and pure cream of tartar, which is derived from grapes. This means that Royal Baking Powder has a wholesome effect on the digestive system and is therefore healthful to use in the family food.

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urging the early erection of an entire new plant for this institution, the first unit to be a psychopathic building.

A site for a new home for Butterworth Hospital, Grand Rapids, Mich., has recently been purchased by Mr. and Mrs. Edward Lowe.

The new Hoffman Memorial Hospital erected at Little River, Kan., by Geo. M. Hoffman, at a cost of $25,000, was opened May 13.

A building at 546 East avenue, Rochester, N. Y., has been leased by New York city and Buffalo parties for a private hospital.

Steps are being taken toward the erection of a county hospital at Sullivan, Ind. A $30,000 bond issue has been sold for the purpose.

The trustees of Flower Hospital, New York city, have issued an appeal for a fund of $100,000 with which to erect a dispensary building.

A two-story addition to contain an operating room and fifteen rooms for patients is being erected by the Chickasha Hospital, Chickasha, Okla.

The Youngstown Sheet and Tube Company, Youngstown, Ohio, has opened its new hospital. Dr. S. R. McCurdy is the chief surgeon.

The Burbank residence, Huntington Park, Cal., has been purchased by Dr. J. H. Turner, who will convert the building into a private hospital.

The tuberculosis sanatorium being erected at Lake Park, Minn., by Becker and Clay counties is expected to be completed by the middle of June.

A community hospital has been opened at Hastings, Mich., in a large residence donated for the purpose. Seventeen patients can be cared for.

The Erlanger Hospital, Chattanooga, Tenn., which has recently opened a new 125-bed addition, is now entirely remodeling its original building.

Mr. and Mrs. Joseph E. McCarthy, Anaconda, Mont., are having plans drawn for a 30-room private hospital which they will erect in Anaconda.

Dr. Michael J. Ford's new private hospital at Omaha, Neb., erected at a cost of between $75,000 and $100,000, will be ready for patients about July 1.

The cornerstone of the Corinne Casanas Free Clinic for the Poor, a new adjunct of the Presbyterian Hospital, New Orleans, was laid with ceremonies May 5.

Miss Marie Rustin, of Portland, Ore., sailed from San Francisco about May 1 to take charge of the Douw Hospital and Training School in Pekin, China.

Mrs. W. H. Mayfield, wife of Dr. W. H. Mayfield, head of the Mayfield Memorial Hospital, St. Louis, died suddenly from apoplexy at the hospital April 25.

The will of the late John Fitzgibbons, a wealthy bachelor of Marshall, Mo., contains a bequest of $100,000 to the city of Marshall for the establishment of a hospital.

A hospital for crippled and deformed children on Bumpkin Island in Boston harbor, which has been closed for several years, will be reopened by A. C. Burrage.

Miss Ludmilla E. Teichmann, R. N., has resigned the superintendency of the Belvidere Public Hospital, Belvidere, Ill., and returned to her home at St. Joseph, Mich.

A movement for the establishment of a Lutheran hospital has been started at Toledo. The promoters plan to organize a stock company and erect a $100,000 building.

Elgin, Ill., is promised two new private hospitals, one to be established by Dr. W. A. Diffenbaugh, of Dundee, Ill., and the other by Drs. Pelton, Pelton & Gabby, of Elgin.

Miss Maude L. Cook has lately resigned the superintendency of the Marietta Phelps Hospital at Macomb, Ill., to accept a position in the Cook County Hospital, Chicago.

Stock is being subscribed at Richmond, Minn., for the establishment of a hospital to be managed by Dr. J. J. Gelz. The erection of a building to cost $20,000 is proposed.

A five-day campaign was launched at Shelbyville, Ill., May 15 with the view of raising $35,000 for the erection

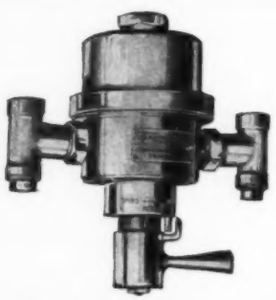
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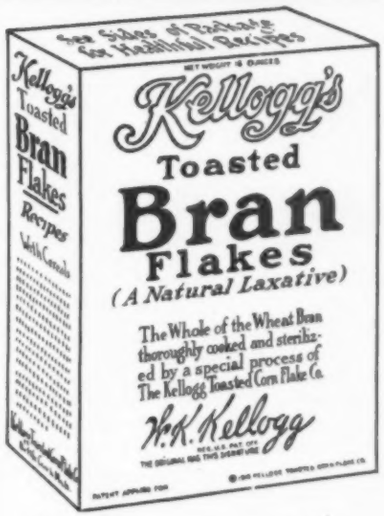
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Battle Creek, Michigan

of a community hospital. George Bolinger, Wm. S. Middlesworth, Dr. J. C. Westervelt, and Mrs. W. C. Kelley are officers of the organization.

A New York corporation, the Aqua Nova Vita Company, is planning to build a $100,000 bath house and sanatorium at Lorain, O. Ferdinand Muckley is the local representative.

A new hospital is projected at Ashland, Wis. A number of the local physicians, including Dr. J. M. Dodd, Dr. Hertzman, and Dr. A. P. Andrus, are supporting the movement.

Dr. J. H. Reuss, owner of the Salome Hospital at Cuero, Texas, has purchased a site for a new, modern home for the institution, which he expects to build in the near future.

The erection of the proposed Henry W. Putnam Memorial Hospital at Bennington, Vt., which has been in contemplation for more than a year, will be begun at an early date.

The Hahnemann Hospital, Baltimore, Md., formerly known as the Maryland Homeopathic Hospital, opened a new building May 1, increasing the capacity of the institution 50 beds.

The Flagler Hospital, St. Augustine, Fla., presented to the city in 1888 by the late Henry H. Flagler, was destroyed by fire the night of May 10. All of the patients were safely removed.

The Kansas State Nurses' Association has organized a public health section with the view of enlisting the cooperation of health officers, physicians, and members of public health boards.

Architects Howard and Merriam, Columbus, O., have been commissioned by the city of Columbus to prepare plans for an isolation hospital, for which a $25,000 bond issue has been voted.

Dothan, Ala., is soon to have two new private hospitals. One is being erected by Dr. Mercer S. Davis and the other will soon be started by Dr. Karl F. Moody. Each building will cost about $25,000.

Miss Drusilla Schenck, formerly superintendent of the Episcopal Hospital for Children, Cincinnati, Ohio, has accepted the position of superintendent at the Children's Hospital, Los Angeles, Cal.

A new hospital was opened at Marengo, Ia., May 1 by a number of local physicians, including Drs. E. N. Brown and I. N. Crow, who are respectively president and secretary of the corporation.

St. Mary's Free Hospital for Children and St. Luke's Hospital, New York city, are to receive $80,000 and $25,000, respectively, from the estate of Mrs. Mary Van Nest Jackson, who died last February.

Miss Anna B. Davis, who has done private nursing in Texarkana for several years, has recently assumed charge of the Pine Bluff Sanatorium, Pine Bluff, Ark., succeeding Miss Bell McKnight, resigned.

A hospital will probably be established at Sterling, Colo., in the near future by a Catholic sisterhood, which proposes to erect and maintain a $75,000 building on the condition that $10,000 be subscribed locally.

The supervisors of Marathon county, Wis., will soon begin the erection near Wausau of a county tuberculosis hospital to accommodate 40 patients. A $50,000 bond issue for the undertaking was voted last year.

Miss Jessie Mashburn, a graduate of St. Maries Hospital, St. Maries, Idaho, has been appointed superintendent of the Idaho Hospital at St. Joe, Idaho, which is operated for the employees of the Milwaukee railroad.

Mrs. Elizabeth D. Jefferies, a registered nurse, is planning to open a private sanatorium in a residence property that she owns at Quakertown, near Allentown, Pa. Mrs. Jefferies is a graduate of Temple University.

Dr. A. J. Moe, who conducts the Southwestern Minnesota Hospital at Heron Lake, Minn., is reported to be planning to build at Sioux Falls, S. D., this summer a three-story fireproof hospital costing $70,000.

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build a large hospital and bath house at Thermopolis, Wyo., on the state hot springs reservation. Dr. C. Dana Carter, of Thermopolis, is at the head of the project.

Physicians of Ennis, Tex., supported by the Ennis Commercial Club, are soliciting stock subscriptions in an association which proposes to build a hospital to care for local and Houston & Texas Central Railroad patients.

According to the Baltimore *Sun* the Union Protestant Infirmary of Baltimore is soon to have a new home costing not less than $250,000. A site for the building has been purchased at Calvert street and Guilford avenue.

Dr. U. C. Billingsley, Hayward, Cal., has leased his private hospital at that place to his former head nurse, Miss A. M. Collins, a graduate of the Fabiola Hospital, Oakland, Cal. Dr. Billingsley will resume private practice.

Harold K. Thurston, a graduate of the Wisconsin State University and for the last three years statistician of the Wisconsin State Board of Control, has accepted an appointment as manager of the Madison General Hospital.

At the Jewish Maternity Hospital, Philadelphia, according to a recent report, 872 babies have been born to 812 mothers in the last year, and there have been no deaths, either of mothers or babies, and no abnormal births.

The Serving Sisters of the Holy Ghost, Techny, Ill., have begun the erection of a hospital at New Hampton, Iowa. The building will be practically fireproof and modern in every way. It will represent an outlay of about $75,000.

A. V. Bradrick, a retired lumberman, of Spokane, Wash., is considering the financing of a proposed hospital at Long Beach, Cal., for free care of crippled children. Dr. J. Scott Brown, an orthopedic surgeon of Long Beach, is connected with the project.

A hospital being erected at Sand Springs, near Tulsa, Okla., by Drs. D. W. and P. C. White will be completed soon. The plant is understood to consist of an administration building and a separate ward each for white, Indian, and negro patients.

The directors of the Grace Hospital, formerly the Hahnemann Hospital, of Kansas City, Mo., have purchased a site at Ninth and Harrison streets for a new building to cost $100,000. It is reported that the construction work will be started this summer.

The sum of $110,000 was distributed among forty-five hospitals in New York city May 1 by the United Hospital Fund, formerly the Hospital Saturday and Sunday Association. This is said to be the largest amount ever distributed by the organization.

A plan to organize a stock company capitalized at $140,000 for the purpose of purchasing the woman's building of the University of Lincoln, Neb., and converting it into a modern hospital is being promoted by a number of local physicians and surgeons.

"Your wishbone is a poor thing to depend on for success —try your backbone," was the slogan adopted by the campaign committee of the Bay Ridge Hospital Corporation, Brooklyn, N. Y., which began May 2 to solicit subscriptions for a building fund of $150,000.

Construction work on the hospital to be erected at Amherst, O., by the Amherst Hospital Company was started May 1. The building is to be a two-story and basement structure costing about $25,000. Dr. G. B. Wiseman is at the head of the undertaking.

The Oregon Association for the Prevention of Tuberculosis, the State Board of Health, and other organizations are urging the Portland city council to amend an ordinance which prohibits tuberculosis hospitals in the city, so that such hospitals may be established.

The Nursing Sisters of the Sick Poor, with headquarters at 439 Henry street, Brooklyn, N. Y., are collecting funds for the erection of a hospital. For thirty-eight years the sisters of this order have done nursing among the sick poor of Brooklyn in their own homes.

The Todd Hospital at Carlisle, Pa., erected a number of years ago by the late Mrs. Todd as a memorial to her husband, General Todd, is to be merged with the new Carlisle

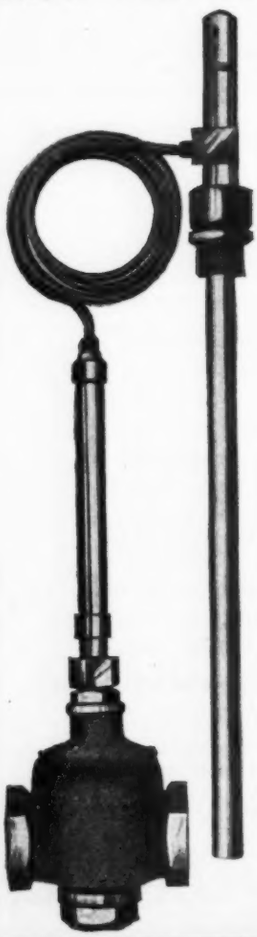


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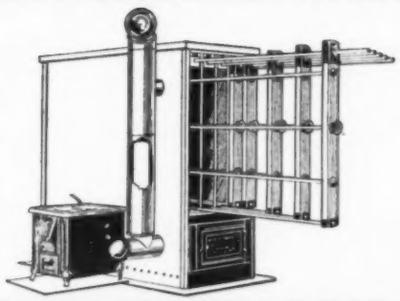
Sarco Temperature Regulators use as their actuating force and motive power the expansion of a sensitive fluid hermetically sealed within a chamber into which is inserted a spirally corrugated tube. By this method a powerful hydraulic pressure is produced at every increase in temperature, tending to close the valve, while every decrease causes a reverse action and tends to open it.

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General Hospital, and will hereafter be known as the Todd Memorial wing of the latter institution.

Construction work on a new $60,000 kitchen and dining room building for the Matteawan State Hospital, Fishkill-on-Hudson, N. Y., will be started this summer if a bill providing the money, which was passed by the state Legislature, is signed by Governor Whitman.

The Monticello (Ia.) State Bank is holding in trust a bequest of $150,000 from the late John McDonald, of Monticello, to be used for the benefit of the poor of Jones county, and a plan to devote the money to the erection and maintenance of a hospital is being considered.

Miss Harriet M. Phalen has been appointed superintendent of the training school at the Ohio Valley General Hospital, Wheeling, W. Va., in the place of Miss Jennie M. Fontaine, who has resigned and will leave the institution June 1. Miss Phalen was Miss Fontaine's assistant.

New buildings increasing the capacity of the Texas State Sanatorium at Carlsbad from 60 beds to 100 beds were opened May 1. Two additional buildings are in course of construction, and when these are completed about August 1 the institution will be able to care for 180 patients.

The Alexian Brothers' Hospital, Chicago, celebrated on May 8, 9, and 10 the fiftieth anniversary of its founding. The hospital was originally opened by Brother Bonaventure Thelen, who came to Chicago from Aix-la-Chapelle. More than 100,000 patients have been treated at the institution.

The Alta (Cal.) Sanatorium, which was closed two years ago when Dr. Burt Howard, then at its head, was placed in charge of the tuberculosis department of the State Board of Health, has been reopened, with Dr. Howard as medical director and Dr. W. J. Broome as resident physician.

Mrs. Gertrude N. Talbot, for the last four years superintendent of the Sunny Crest Sanatorium, Auburn, N. Y., has accepted the position of head nurse at the new Cattaraugus County Tuberculosis Hospital at Knapp Creek, near Olean, N. Y., of which Dr. Edward Torrey is superintendent.

Plans have recently been completed by Architect Julia Morgan, of San Francisco, for a handsome addition to the King's Daughters' Home for Incurables, Oakland, Cal. The present main building of the home was erected in 1912, but is now inadequate to accommodate the increasing number of patients.

Dr. G. W. McKinnon, who conducts the Trinity Hospital at Arcata, Cal., has recently formed a partnership with Dr. G. P. Purlenky, who will hereafter be connected with the institution. Dr. Purlenky has been in charge of the Union Lumber Company's hospital at Fort Bragg, Cal., for the last eight years.

Mrs. Sarah Robertson, of Mineola, N. Y., was recently awarded $12,000 by the New York Supreme Court in a suit against a private sanatorium of New York city, charging the sanatorium with neglect in the case of her husband, who, while a patient at the institution, jumped out of a window and was killed.

The Protestant Hospital Company, recently organized at Clarksburg, W. Va., will soon begin the erection of a $150,000 building on the site of the old Showalter Hospital in that city. The structure will be five stories high and about 100 feet square. A roof garden and a number of fresh air balconies will be features.

The North Dakota Association of Registered and Graduated Nurses has been granted a charter by the secretary of state. Misses L. Slettebok and Mary E. Sullivan, of Fargo, and Miss Lena Guithner, of Grand Forks, are directors. A law licensing nurses was passed at the last session of the North Dakota Legislature.

According to the Louisville (Ky.) *Post*, Colonel L. M. Maus, secretary of the Kentucky Board of Tuberculosis Commissioners, is of the opinion that the single county tuberculosis hospital plan is not practical, owing to the lack of proper financial support. Colonel Maus recommends that the state of Kentucky be divided into nine districts, with a population of 200,000 to 300,000 each,



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and that a tuberculosis hospital be built and maintained jointly by the counties composing each district.

It is understood that the sphere of usefulness of the Mercy Hospital, Hamilton, O., will be considerably increased as a result of a recent purchase of property adjoining the hospital site. The character of the contemplated improvements has not been announced, but it is reported that a new building is planned.

A ten-day "whirlwind" campaign was launched by the Bay Ridge Hospital Corporation, Brooklyn, N. Y., on May 2 for the purpose of raising $150,000 to build a hospital. The organization has maintained a dispensary and small emergency hospital in South Brooklyn for several years, and in 1915 treated more than 7,000 cases.

Mrs. Harriett Knapp has resigned the superintendency of the Stillwater City Hospital, Stillwater, Minn., to accept the position of superintendent of nurses at the Agnew Sanatorium, San Diego, Cal. Miss Lillian Staples, a graduate of St. Barnabas Hospital, Minneapolis, is the new superintendent at the Stillwater institution.

The building of a Catholic hospital at LeMars, Ia., which has been under consideration for a year or more, is about to materialize according to an announcement recently made by Rev. Mgr. F. X. Feurstein, of LeMars. A site for the structure has already been purchased, and an active canvass for building funds will be inaugurated shortly.

A negro ward to cost $100,000, a contagious disease building which will require an expenditure of $25,000, and a $75,000 nurses' home are being planned for the Memorial Hospital, Richmond, Va. Both the negro ward and the nurses' home are to be six stories high. It is probable that the construction work will be started this summer.

A fine, new plant is practically assured for the Samaritan Hospital, Sioux City, Ia. M. C. Davies, a local financier, offers to donate $100,000 toward the building, provided the trustees of the hospital will raise an equal sum, and it is believed that other friends of the institution will readily contribute to enable it to meet the condition of the gift.

Dr. W. A. Geckler, who has been connected with the Chicago Municipal Tuberculosis Sanatorium as associate medical director since its founding, was on May 3 appointed medical superintendent of the institution, and Mr. Charles J. Happel was appointed business manager. Mr. Happel was formerly warden of the Cook County Hospital.

The Leo N. Levi Memorial Hospital at Hot Springs, Ark., which has been in operation about two years, was formally dedicated on May 4 by delegates to the grand lodge of the Independent Order of B'Nai B'rith, which closed its annual convention in Little Rock May 3. The hospital was erected by the southern district of the order.

The Presbyterian Hospital, Philadelphia, will soon begin the erection of a $100,000 building to be used for laboratory and dispensary purposes. This structure will be the first of six units designed to form a complete new plant for the institution. The next unit will be a building for private patients, but this will probably not be started until next year.

Dr. Rudolph Matas, Dr. Joseph A. Danna, Dr. John B. Elliot, Jr., Dr. Robert C. Lynch, Dr. G. Wilson, Dr. Charles Landfried, and Dr. Luther Sexton, all of New Orleans, have been appointed an advisory committee in connection with the planning of the $50,000 tuberculosis hospital to be erected in that city as a memorial to the late John Dibert.

The colonial type of architecture has been decided on for the building to be erected this summer by the Mansfield General Hospital Association, Mansfield, O. The structure will be two stories high, and is designed to accommodate 60 patients. The exterior will be of stone and brick. Floors will be of concrete, covered with battleship linoleum.

Dr. Mary Shi-Mai-Kai, head of the Danforth Memorial Hospital, a Methodist mission institution at Kuikiang, in central China, is in this country, taking a post-graduate course in medicine at the Johns Hopkins University. Dr. Shi-Mai-Kai, known among her friends here as Dr. Mary Stone, was educated in this country. She received her degree of M. D. at the University of Michigan in 1894, and since that time has been working among the people

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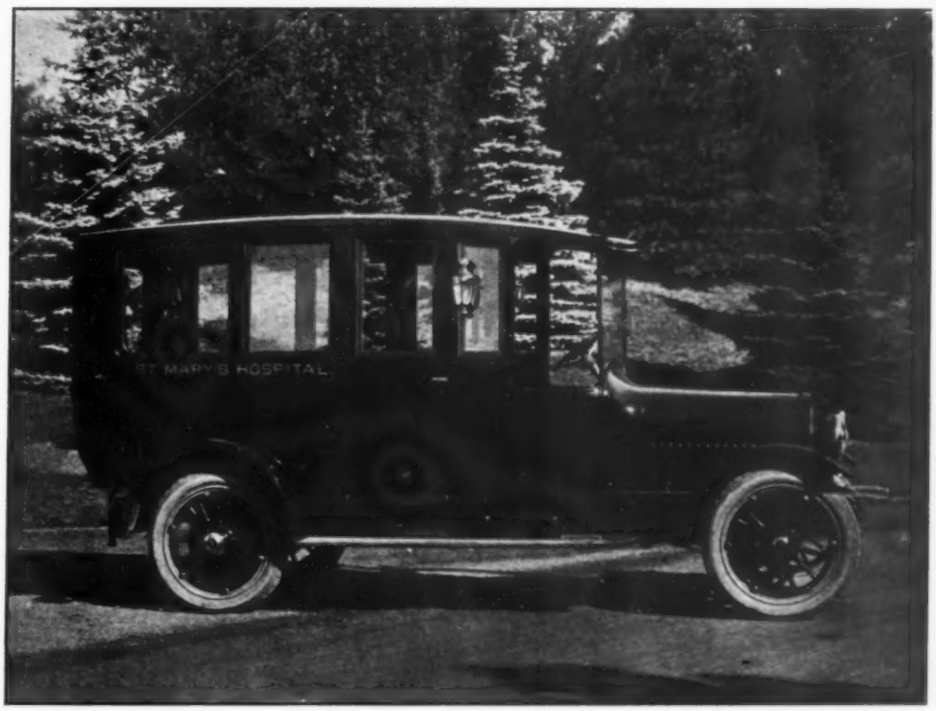
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Robert W. Hebberd, secretary of the New York State Board of Charities since 1896, with the exception of four years, during which time he served as charity commissioner in New York city, has resigned the position. Mr. Hebberd began organized charity work in 1882 as a visitor for the New York Association for Improving the Condition of the Poor.

The Laurel General Hospital Association has been organized at Laurel, Miss., for the purpose of erecting and operating a hospital. Plans for the proposed building, on which it is reported construction work will be started at once, provide for a four-story structure, 36x120, estimated to cost $40,000. Dr. T. H. Seay is actively interested in the undertaking.

A site has been purchased in Toledo, O., for a modern fireproof hospital to be erected by the Sisters of Mercy, whose mother house is at Tiffin, O. It is reported that the new institution will be managed by Mother Bernardine, who is now at the head of Mercy Hospital at Tiffin and who was formerly superintendent of St. Mary's Hospital, Grand Rapids, Mich.

St. Luke's Hospital and Home Association is a new corporation at Portsmouth, N. H., which proposes to establish and maintain a hospital and home for the aged and for invalids. The organization was formed under the auspices of Christ Church of Portsmouth. Charles LeV. Brine, Dr. Frederick S. Towle, and Dr. Eugene B. Eastman are named in the list of incorporators.

The new Oklahoma Hospital in course of construction at Tulsa, Okla., is ready for the roof and will probably be entirely completed by the middle of July. The building is a four-story fireproof structure, and will have a capacity of 40 to 50 beds. It is being erected by a corporation of which Dr. Frederick S. Clinton is the head. The cost is understood to be about $75,000.

A number of hospitals in Chicago have indorsed a proposal to institute a vigorous campaign for the elimination of unnecessary noises in the near vicinity of hospitals. Some of the noises classed as nuisances are those made by heavy autotrucks, parking of doctors' cars in front of the hospital, motorcycles, roller skates on the sidewalk, and nocturnal canine and feline prowlers.

The city of Macon, Ga., has been planning to spend $100,000 on new buildings for its municipal hospital, but the board of hospital commissioners has decided that, in order to rebuild the hospital so that it will be in keeping with the needs and dignity of the city, a larger fund will be required, and the board is asking the mayor and council for an additional appropriation of $100,000.

STATEMENT OF OWNERSHIP, MANAGEMENT, ETC., REQUIRED BY THE ACT OF AUGUST 24, 1912

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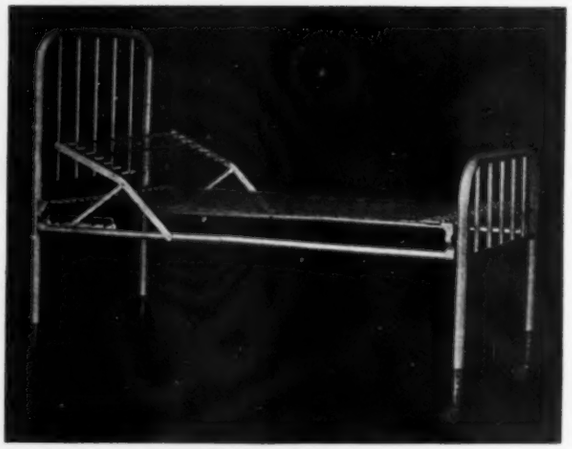
(Signed) OTHO F. BALL,
President The Modern Hospital Publishing Company, Inc.

Sworn to and subscribed before me this 31st day of March, 1916.

(Seal) ANNA H. PFEIFER,
Notary Public.

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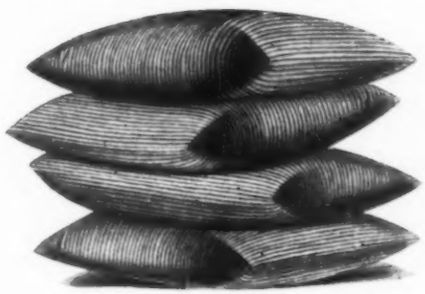
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POSITION—As superintendent of a general hospital by a man 45 years of age. Have had seven years' experience in one of the largest hospitals in the country. Address J. J. D., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

POSITION—Man and wife wish to make a change to larger field; both have had the best of experience in hospital work; wife is an R. N., and both are good financiers and good hustlers; no children; at present in charge of a small city and county general hospital. Address B. F. M., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

POSITION—By a graduate registered nurse who has had excellent executive and administrative work, with six years' experience, position as superintendent of hospital and training school, or superintendency of a medium-sized general hospital; can furnish highest of credentials. Address B. S., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

POSITION—By a registered graduate nurse of a large eastern hospital, position as superintendent of a hospital of about 75 beds; expert financier, training instructor, and buyer of supplies; East preferred. Address F. C. M., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

POSITION—As dietitian in a large hospital; ten years' experience; domestic science graduate; experienced in buying food supplies; state salary and number of beds; middle West preferred. Address Dietitian, 1308 West Sixth street, Davenport, Iowa.

POSITION—By a graduate registered nurse, position as surgical supervisor; experienced; best of references. Address R. A., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

POSITION—As housekeeper in a large hospital; two years' experience; excellent references. Address R. R., care T. J. Campbell, Winterset, Iowa.

POSITION—College woman, registered graduate nurse, with excellent experience as superintendent, general and surgical work, desires position in larger hospital than at present; superintendent or superintendent of nurses; unexceptionable references. Address C. M. P., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

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POSITION—An unincumbered active Protestant male physician desires professional care of chronic patient; will act as manager and secretary; travel anywhere; highest credentials. Address F. M. N., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

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POSITION—As superintendent of a medium-sized hospital by a graduate nurse who is an R. N. (New York and Pennsylvania); for the past five years has been superintendent of a small hospital. Address S. H., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

Continued on page 50

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Continued from page 48

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WANTED—Assistant superintendent for hospital of rank and size in a western city; must be graduate of medicine, but executive ability most important; unincumbered man who has had experience in similar position will be given preference; full details, with photograph, references, age, married or single, experience, etc.; correspondence confidential if requested. Address S. A. C., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

WANTED—Correspondence solicited with experienced woman in buying and general housekeeping in tuberculosis sanatorium; have capacity of 125; state all particulars in replying and name salary; position open June 1. Address S. T. D., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

WANTED—Superintendent of nurses wanted for 200-bed hospital in the East; an able, experienced, middle-aged woman preferred; must be a good executive; the institution is a growing one and offers splendid opportunities to one who can make good; apply, stating age, previous experience, and salary desired; communication will be held in strict confidence. Address A. M. H., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

WANTED—Lady superintendent and principal of training school, Vancouver General Hospital. Applications will be received up to June 22, 1916. Hospital of 600 beds and training school of 150 nurses. State qualifications and recommendations. M. T. MacEachern, M. D., General Superintendent Vancouver General Hospital, Vancouver, B. C.

WANTED—An experienced Catholic nurse to take charge of a training school and obstetrical cases in a sisters' hospital in Canada (Ontario); good salary; 130 beds; thirty pupil nurses. Address M. S. H., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

WANTED—Unassembled examinations for the following positions will be held in June at the Charitable Eye and Ear Infirmary, Chicago: assistant ear surgeon, salary up to $41.66 a month; assistant eye surgeon, salary up to $41.66 a month; ear surgeon, part time work, no salary; eye surgeon, part time work, no salary; assistant pathologist, eye and ear, salary up to $41.66 a month. At Psychopathic Institute, Kankakee: clinical pathologist, salary $150 to $200 a month; biologic chemist, salary $150 to $175 a month. Examinations open to nonresidents of Illinois. Examinations consist of verification of training and experience and a personal interview. Applications must be filed before June 9. For details and application blanks address State Civil Service Commission at Springfield, Illinois, or 904 130 North Fifth avenue, Chicago, Illinois.

WANTED—Boston private hospital of 50 beds, specializing in obstetrics and surgery, patronized by many of the best physicians in Boston, wants capable graduate not less than 30 years of age as assistant superintendent and superintendent of training school; must be graduate of hospital of recognized standing, experienced in institutional supervision, and possessed of executive ability; good salary to capable person. Apply to Bertha Hart Burt, superintendent The Hart Private Hospital, Inc., 95 Moreland street, Boston, Mass.

NURSES' TRAINING—The New Britain General Hospital, New Britain, Conn., offers a two and one-half years' course of training for nurses. For full particulars address Superintendent New Britain General Hospital.

NURSES—If you are looking for work or have any friends that wish work, write us. We can use about 50 to 100 graduate registered nurses for all kinds of positions. We do not charge one cent to register with us, so write quick. Halbur Exchange, Halbur, Iowa.

FOR SALE

FOR SALE—Well-established private sanatorium, centrally located in New York city; for medical, surgical, and obstetric cases; accommodations for thirty patients; owner wishes to retire. Address Box 1, THE MODERN HOSPITAL, 1 Madison avenue, New York city.

Continued on page 52

To Hospital Superintendents

who have had their fill of Wall Finishes that *don't finish;* of Wall Finishes that crack, peel and check; become streaked and dull when washed, and fail in other respects, we offer a positive remedy that cures all wall finishing complaints.

It is a remedy that makes wall finishing a source of pride and satisfaction—a remedy that has proved its worth for eight solid years on the walls of the finest and biggest hospitals and institutions in the country.

That remedy is

Hockaday's Interio

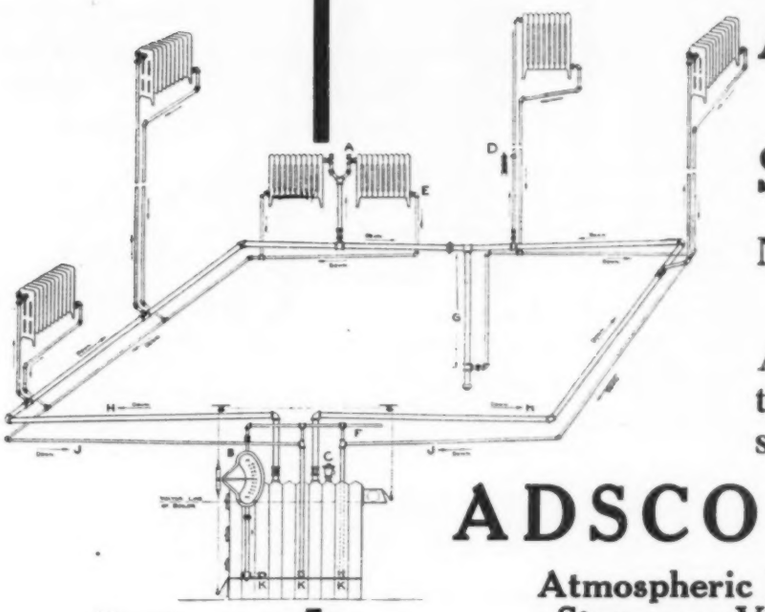
the Wall Finish that produces just the kind of surface a hospital requires—hard, non-porous and strictly *sanitary.* Can be washed like a piece of glass, the dirt washing OFF and not IN. TWO COATS, without a Size, is all that is required, and it will *endure* for years. It contains no *lead.*

Its adoption is an investment, as by it your maintenance charges are largely eliminated.

For further particulars write

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No noise; no leaky valves; no complicated devices

A great saving in installation cost and a greater saving in operating cost.

ADSCO HEATING

Atmospheric Pressure System
Steam or Vapor using the

Simple
Positive
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ADSCO VALVE

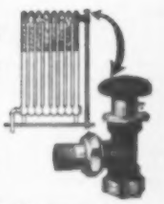
ADSCO = Graduated Radiator

Steam pressure required, only 5 ounces



The installation of the ADSCO System in this modern hospital is worth your investigation.

For Central Station or Individual Boiler Supply



Valve open 50% gives 50% radiation—not 90% or 10%, as with other methods.

A simple method of piping supplies steam to the radiators, and carries back condensation. House boiler may be used or steam service may be taken from underground main of a central heating station.

Write for Bulletin 133-H

AMERICAN DISTRICT STEAM COMPANY

General Offices and Works
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NEW YORK CHICAGO SEATTLE

CLASSIFIED ADVERTISING.

Continued from page 50

SCHOOLS, SPECIAL INSTRUCTION, ETC.

MASSAGE AND ELECTRO-THERAPEUTICS—Eight months' course, complying with requirements of Pennsylvania Bureau of Medical Education and Licensure. Four to six hours a day of practical work in wards and dispensaries, besides lectures and demonstrations. Open to men and women. Course begins October 2. For announcement and particulars write to the dean of the Philadelphia Polyclinic, Eighteenth and Lombard streets, Philadelphia, Pa.

CORRESPONDENCE solicited with training schools or groups of nurses desiring instruction in dietetics now or for next year. Very broad, thorough, up-to-the-minute course given by trained teacher with several years' experience in the best hospitals in the country. Splendid references. Address F. M. L., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

A THREE-MONTHS' COURSE IN OBSTETRIC NURSING given by the Elizabeth Steel Magee Hospital of Pittsburgh, Pa. Open to graduate nurses and to pupil nurses in training in general hospitals. There is an active service, including out-patient department; 1,500 confinements a year available for teaching purposes. Weekly lectures by the medical staff and weekly classes by the directress of nurses and her assistants. Special instruction and service in the labor departments, puerperal wards, and nursery. Diploma given at the end of the course. Affiliation with training schools in good standing especially desired. Address all communications to the Directress of Nurses.

THE SCHOOL OF MEDICAL GYMNASTICS AND MASSAGE offers a practical and theoretical course in Swedish Movements, Massage, Baking, Electric Vibration, etc. Diploma. Patients secured. For further information apply School of Medical Gymnastics and Massage, 61 East 86th street, New York, N. Y.

INSTRUCTION IN MASSAGE FOR THE TRAINED NURSE—Swedish Movements, Medical and Orthopædic Gymnastics, Electro-Therapy and Hydro-Therapy. Complete instruction in all branches of physiologic therapeutics, including double light, hot air baths, baking, vibrators, nebulizers, solar and leucodescent lamps; Bier's hyperemia method; galvanic, faradic, and static electricity; high frequency and sinusoidal currents; x-ray; Dr. Schnee's four-cell bath; Bachelet magnetic wave; Nauheim baths and Schott exercises. Medico-mechanical Zander gymnasium installed. Separate male and female classes. Diploma issued. Particulars and illustrated booklet on request. Duration of terms, four months and eight months. Prepares you for Pennsylvania State Board Examinations. Summer class opens July 5, 1916. First section of fall class opens September 20, and second section of fall class opens November 22, 1916. Pennsylvania Orthopædic Institute and School of Mechano-Therapy, 1703 Green street, Philadelphia, Pa.

INSTRUCTION IN MASSAGE, Swedish Movement Treatment, Anatomy, and Physiology. Axel C. Hallbeck. Qualified by Royal Swedish Board of Medicine, Chief of Massage Clinic St. Luke's Hospital, Hospital for Ruptured and Crippled, etc. 181 West 87th street, New York. Telephone Schuyler 8358. Students have the advantage of assisting extensively in clinical work; 1,250 patients treated last year.

MISCELLANEOUS

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GENERAL SERVICE—Physicians, surgeons, and nurses furnished free for hospitals or assistants; permanent position for nurses, any kind of work in any State or Canada; practices of physicians, surgeons, dentists, and also veterinarians handled and furnished in all the states; drug stores for sale; medical appliances, books, etc. (second-hand), sold and furnished; positions furnished in all the states. F. V. Kneist, Omaha, Neb.

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THE G. S. BLODGETT COMPANY, Burlington, Vt., manufacturers of the Blodgett Portable Oven (see announcement on page 66 of this journal), passes into the hands of the secretary and treasurer, Mr. John S. Patrick, George H. Holden, president, retiring. Mr. Patrick has been with the company for twenty-five years and is very closely identified with all its interests.

ICE CRUSHER—In addition to manufacturing the Peerless Ice Cream Freezer, shown on page 66 of this journal, we produce the Toy Town Ice Crusher, which is especially suitable for use in hospitals and kindred institutions. Write for our circular and full information. Peerless Freezer Company, Winchendon, Mass.

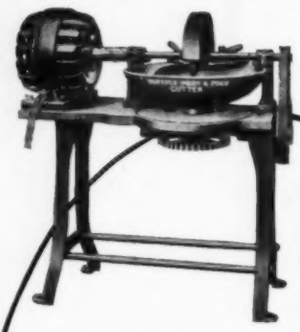
OUR SILENT CALL SYSTEM CAN BE READILY INSTALLED IN INSTITUTIONS after they are built and occupied, because it has been designed to be connected on the regular lighting circuits of a building. The expense is not prohibitive. Write to our nearest office for complete details. Bryant Electric Company, Bridgeport, Conn.; New York, Chicago, and San Francisco.

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Continued on page 54



No Kitchen Economy is more important than this

A Buffalo Meat and Vegetable Chopper

will prepare quickly and satisfactorily such foods as

Hamburger Steak, Sausages (all kinds), Mince Meat, Hash (Lamb, Veal, Chicken), Croquettes (all kinds), Poultry Dressing, Chopped Cabbage, Relishes, Salads, Spinach, Onions, Potatoes, Peppers.

Crackers and Bread for Puddings, Fruits for Puddings and Pies.

The Buffalo Meat and Vegetable Chopper

chops in ten minutes food that would take two hours to chop by hand. It chops it into fine particles. It wastes none of the juices nor any of the nutritive qualities, because it does not squeeze, mash, nor tear the foods.

It CUTS it.

It Will Reduce Your Food Bills and Your Payroll.

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"They told me my baby was dead, but the Lungmotor saved him"—

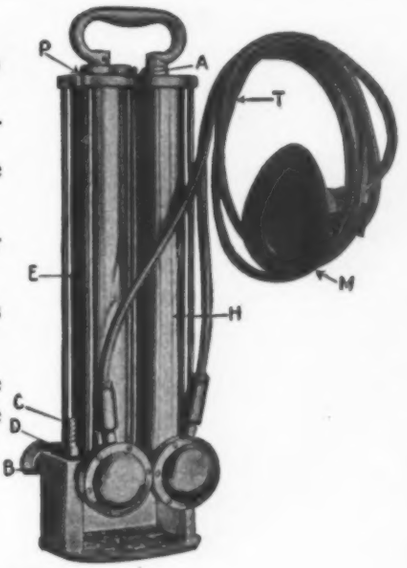
thus spoke a mother while watching a demonstration of the Lungmotor at the Baby Week Conference in Chicago.

Over two hundred and fifty communities had the Lungmotor on exhibition during Baby Week.

SOON, IF NOT ALREADY, mothers and expectant mothers will ask this protection from you.

No other action on your part can do more to win the confidence of these expectant mothers than by offering them and those precious little lives Lungmotor protection.

This Hospital was prepared. Are You?



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TELEGRAM

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249 G DK N.L. WHEELING WVA MARCH 12 1916

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For ethical reasons names omitted. Supplied on request.

"For the love you bear your mother, be prepared to save some other mother her baby."
Send for "Lungmotor Facts." They give details. No obligation.

LIFE SAVING DEVICES, Inc., 184 N. Market Street, CHICAGO, ILL.

"It is not how many babies are born, but how many live, that count"

CLASSIFIED ADVERTISING.

Continued from page 52

MISCELLANEOUS—Continued

SANITARY APPLIANCES AND HYDROTHERAPEUTIC EQUIPMENT—We manufacture not only a general line of hospital sanitary appliances, but also a number of hospital specialties that will insure cleanliness and prevent infection. Our hydrotherapeutic equipment is of a character that will appeal to the management of any hospital as being practical and efficient. Write for a catalogue illustrating our specialties for hospitals. The J. L. Mott Iron Works, Fifth Avenue and 17th Street, New York.

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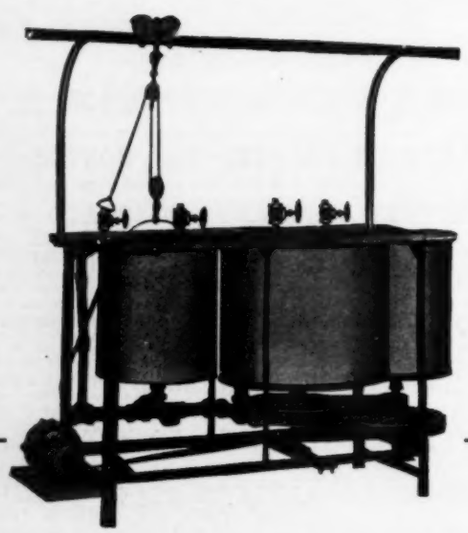
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It is almost needless to remind those entrusted with a hospital's management that the Refrigerator is one of the most important items of its equipment. Nearly all foods pass through it—and while *in it* are preserved or deteriorate.

The MONROE
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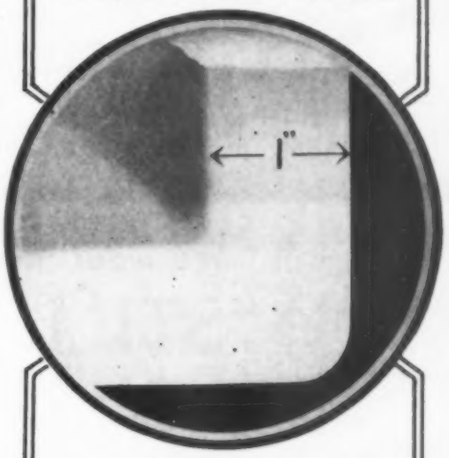
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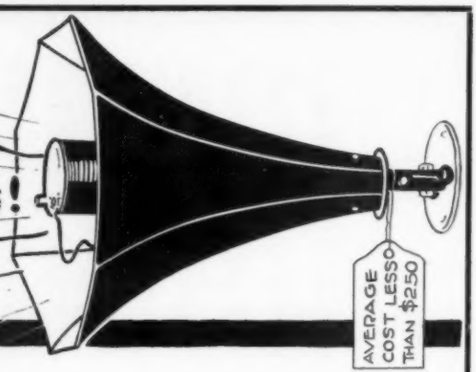
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Hospital Superintendents! Please!



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"STILL SMALL VOICE"

Hospital Call System

without any obligation to you. So great is our confidence in our "Still Small Voice" System and in the probability of your installing it when once you know of the advantages and work it performs, that we will send you all or any part of a system for unrestricted trial in your institution.

There are no strings attached to such a trial—no obligations on your part whatever. Though the system works perfectly, and though you realize that it is just the thing for your hospital, if it costs ten cents more than you can afford to pay, return it to us. No money paid out—none lost.

Installation.—The entire system is easier and simpler to install than the telephone. Your engineer or local electrician can quickly and easily set it up and connect it. Equipment for trial purposes can be installed on two or three floors without any muss or noise, and without disturbing the patients.

Cost and Terms.—Should you and your directors desire to retain or install the entire system after sufficient trial, dictate your own terms of payment, *the average cost of the complete installation being less than $250.* It costs nothing to operate the system, and it is as good after fifty years as it was when new. If not satisfactory, return the system to us—no obligations and no "reasons why."

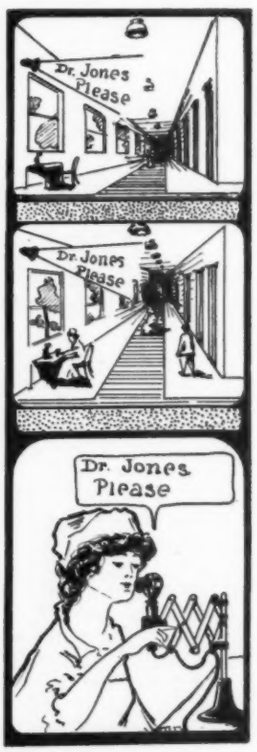
This system consists of a number of reproducer horns located through the corridors, dining rooms, and wherever desired in all of the hospital buildings. The central talking station is usually located at the telephone operator's switchboard. Whatever is spoken into the central station is *instantaneously* and *simultaneously* repeated by all the reproducer horns. The volume of tone may be regulated to any desired volume, the reproduction being perfect in volume and articulation. The person called steps to the nearest phone and receives his or her message.

The Still Small Voice System is absolutely indispensable in your hospital. It places your entire organization under your very finger tips. You can instantly locate anyone for any purpose—nurses, interns, doctors, engineers, and employees, and give them their instructions without delay.

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It is the only really effective and comprehensive hospital call system for locating people in the hospitals, for spreading messages, and for emergency calls or instructions. These are but a few of the many reasons why many large and small hospitals everywhere are installing this system.



We go more than half way in demonstrating the trouble, worry, and money-saving advantages of this truly wonderful and ideal call system. We are anxious for you to try it out and judge for yourself. We want you to fill in, tear off, and mail the attached coupon today. While you are at it, tear it off and mail it now.

Winkler & Reichmann, 220 S. State St., Chicago.
Please send further particulars concerning your Hospital Call System and trial proposition to

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(Name of Hospital) .....

(City) .....

(State) .....

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American Hospital Association.....	Dr. Winford H. Smith, superintendent Johns Hopkins Hospital, Baltimore	Lydia Keller, R. N., Northfield, Minn.	Sept. 26-29, Philadelphia
American Medical Association.....	Dr. William L. Rodman, 2106 Walnut st., Philadelphia	Dr. Alex. R. Craig, 535 N. Dearborn st., Chicago	June 12-16, Detroit
American Nurses' Association.....	Anne W. Goodrich, R. N., Teachers' College, Columbia University, New York	Katharine DeWitt, R. N., 45 S. Union st., Rochester, N. Y.	April 27-May 3, New Orleans
Catholic Hospital Association.....	Rev. C. B. Moulinier, Marquette University, Milwaukee, Wis.	Dr. Maud R. Williams, 431 12th st., Milwaukee	June 7-9, Milwaukee
Clinical Congress of Surgeons of North America	Dr. Fred B. Lund, 527 Beacon st., Boston	Dr. Franklin H. Martin, 30 N. Michigan ave., Chicago	October 23-28, Philadelphia
National League of Nursing Education	Clara D. Noyes, R. N., Bellevue Hospital, New York	Isabel M. Stewart, R. N., Teachers' College, Columbia University, New York	April 27-May 3, New Orleans
National Organization for Public Health Nursing	Mary S. Gardner, R. N., 109 Washington st., Providence, R. I.	Ella Phillips Crandall, R. N., 25 W. 45th st., New York	April 27-May 3, New Orleans
State Hospital Associations			
Kansas Hospital Association.....	Dr. J. T. Axtell, Newton, Kas.	Dr. W. R. Dillingham, Halstead, Kas.	May 2, Topeka
Ohio Hospital Association.....	Dr. E. R. Crew, superintendent Miami Valley Hospital, Dayton, O.	Howell Wright, 308 Anisfield Building, Cleveland, O.	May 24-26, Cincinnati
West Virginia Hospital Assn....	Dr. G. C. Schoolfield, trustee, Charleston General Hospital, Charleston, W. Va.	Dr. W. H. St. Clair, superintendent Bluefield Sanitarium, Bluefield, W. Va.	May 16-18, Wheeling
Canada			
Canada Hospital Association.....	Dr. E. H. Young, Rockwood Hospital for the Insane, Kingston, Ont.	Dr. W. J. Dobbie, Toronto Free Hospital, Weston, Ont.	
England			
British Hospital Association.....	H. Wade Deacon, Royal Infirmary, Liverpool	Conrad W. Thies, J. Courtney Buchanan, Metropolitan Hospital, London	

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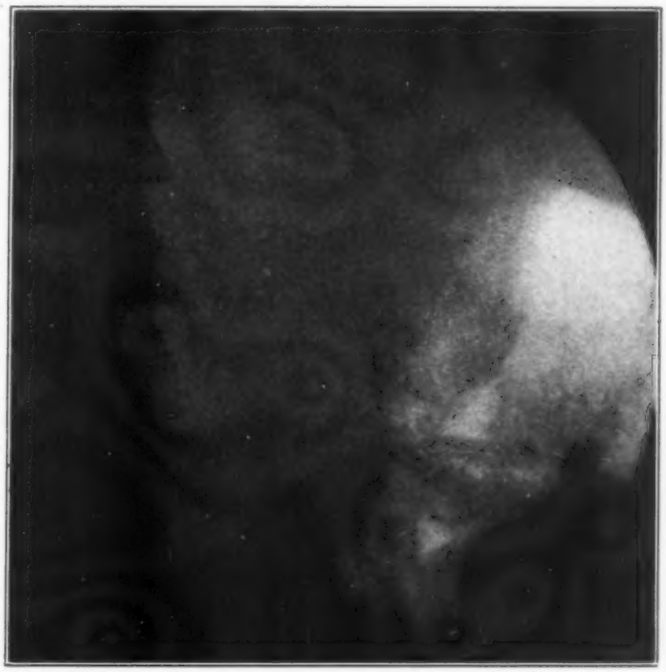
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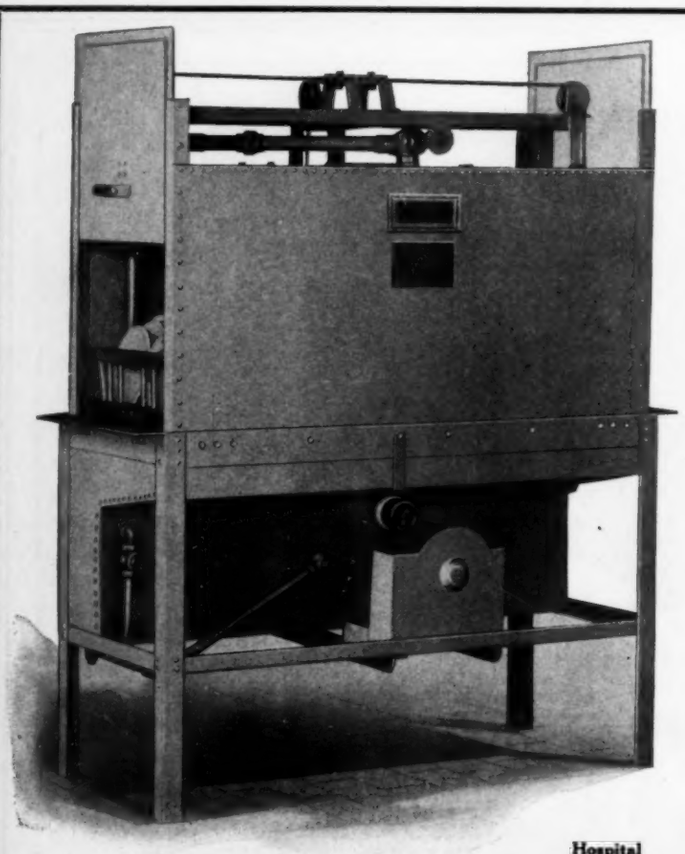
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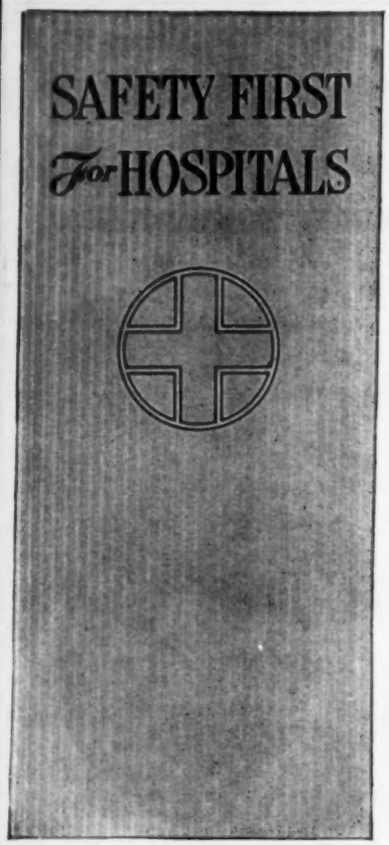
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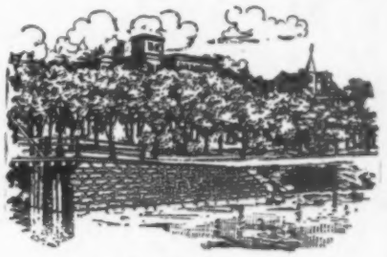




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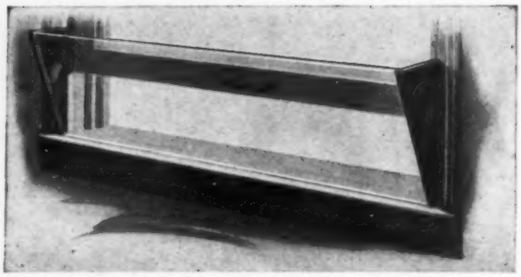
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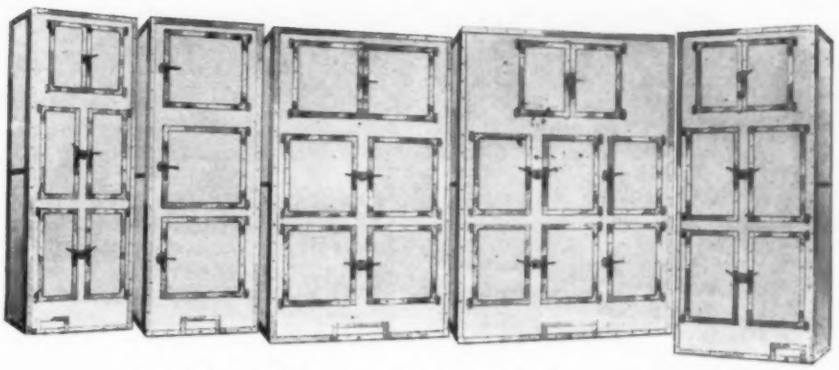
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Also in United States Pure Food Laboratories, United States Commissaries, United States Senate Restaurants, and numerous other Government Buildings, Battleships, Forts, etc.



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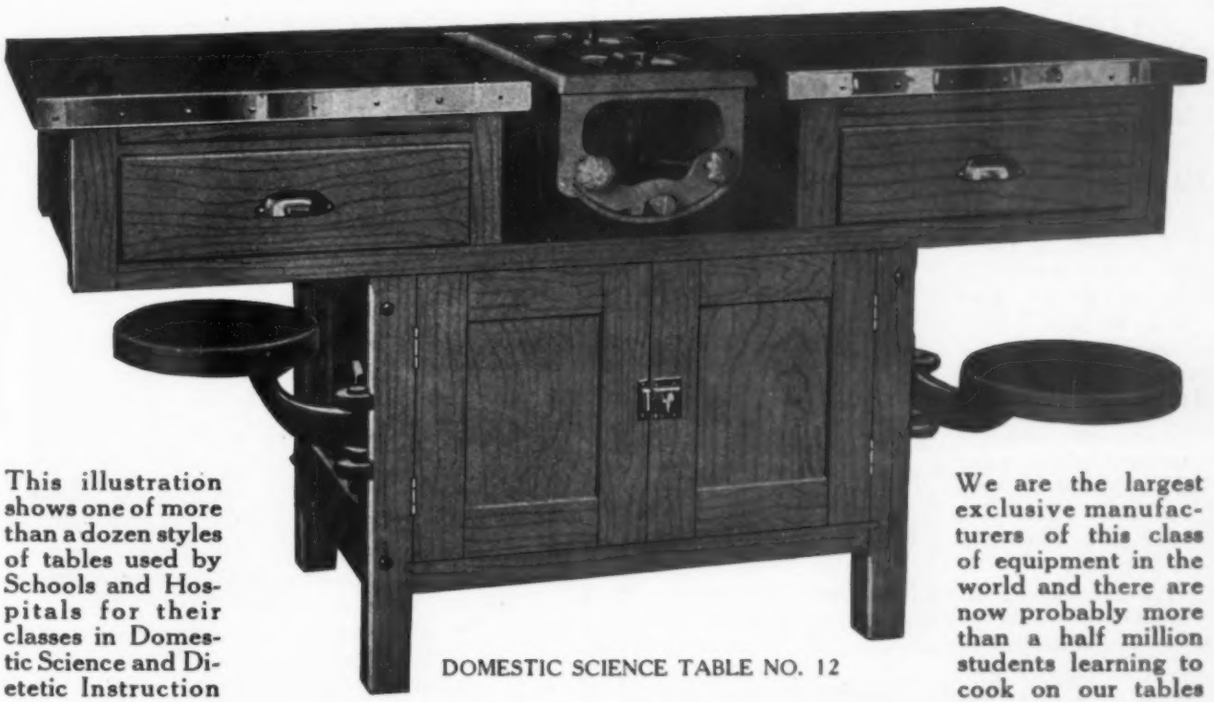
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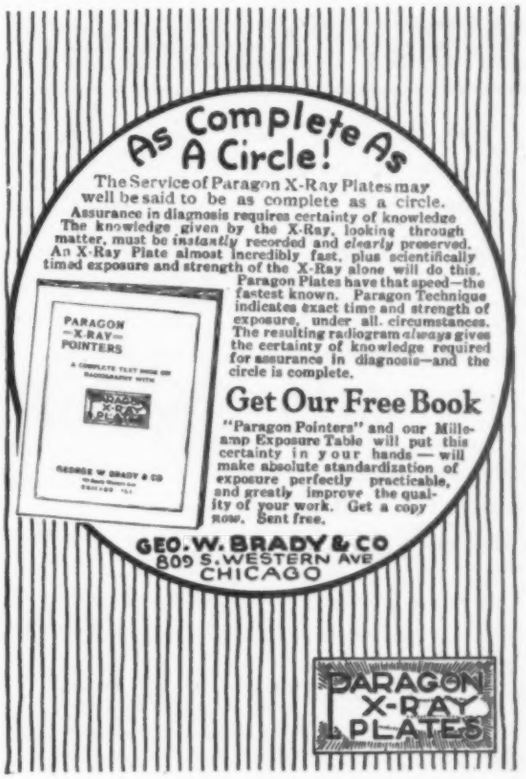
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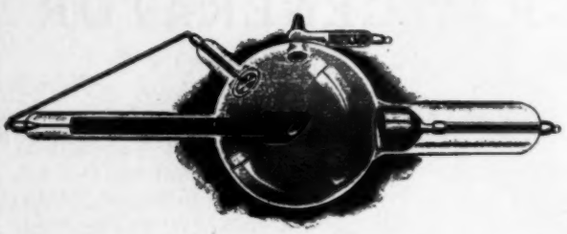
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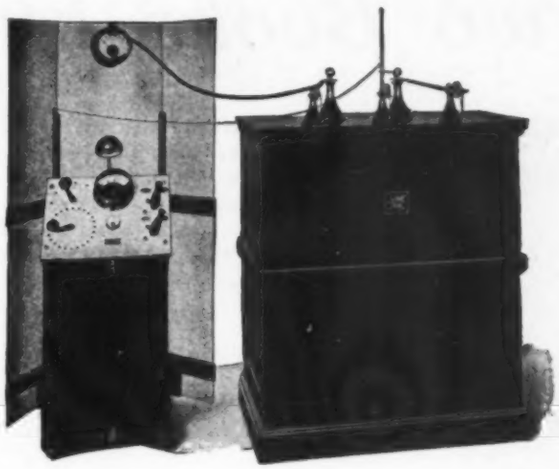
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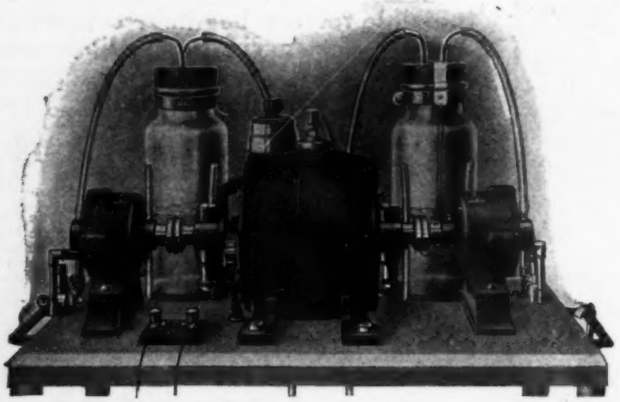
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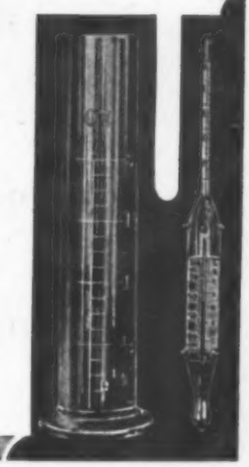
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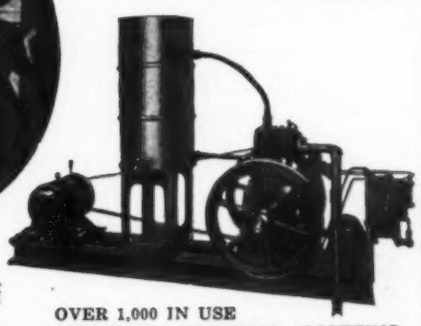
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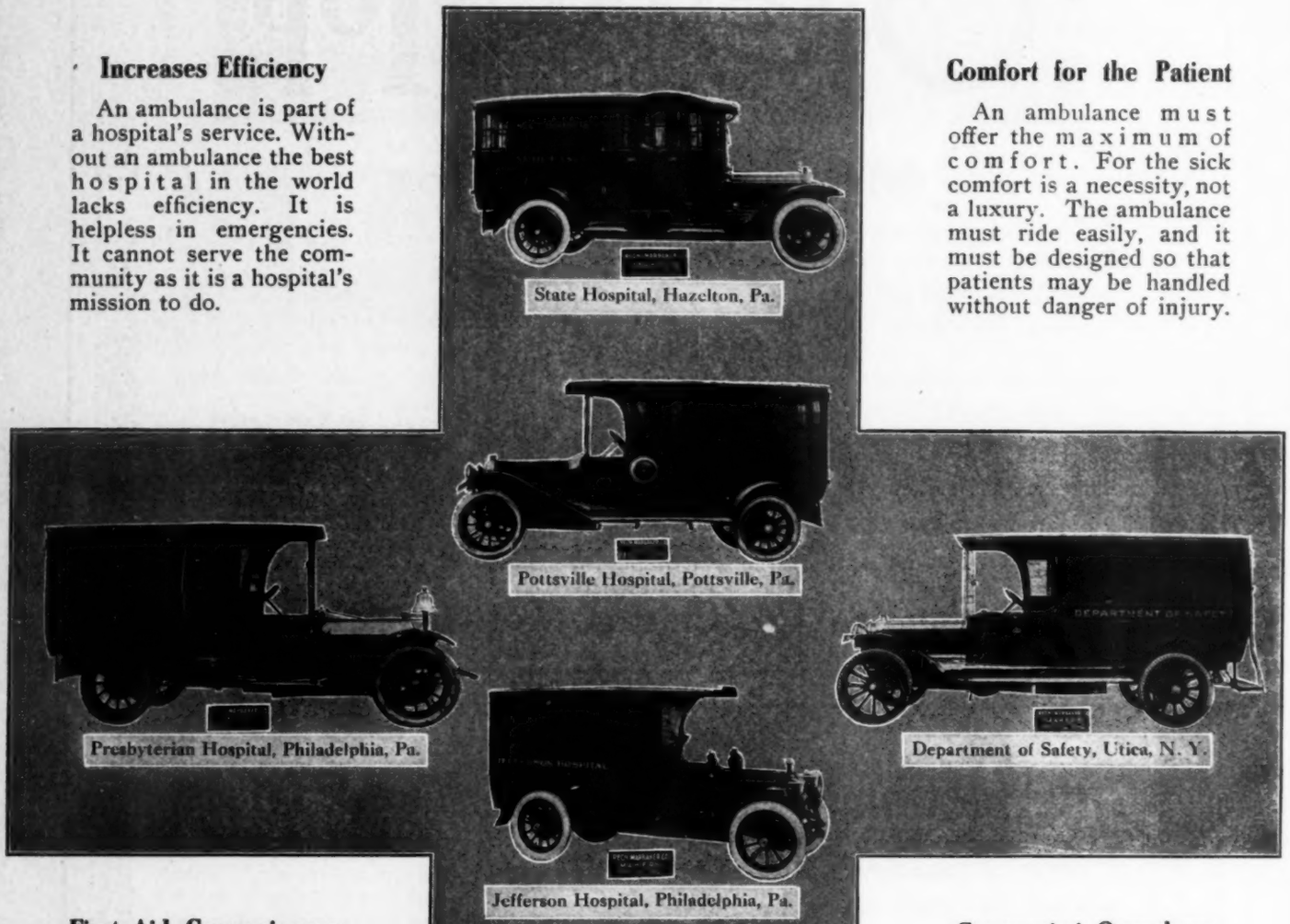
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Particularly Well Adapted to Hospital Use

We call your attention to the illustrations shown here of several types of

TRADE MARK
AGLITE ALL GLASS
PATENTS PENDING

Lighting Fixture

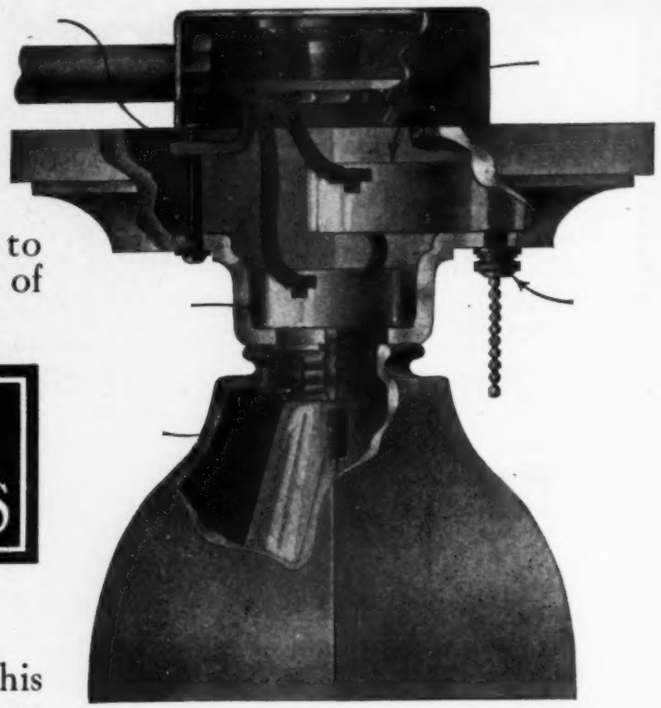
There is no metal at all to this fixture—nothing to discolor or to become tarnished—nothing to crack or check. To clean it, all that need be done is to wipe it off with a damp cloth—valuable feature from a hygienic standpoint.

The Aglite in its rich, marble-like beauty harmonizes perfectly with the other hospital fixtures.

Its construction is simple, substantial and practical. No insulating joints, canopy or splicing of wires are required.

Complete Literature on Request

We shall be pleased to send you printed matter illustrating the many and various styles of the Aglite, also detailed description of the fixture.



This cross-sectional illustration of the AGLITE all-glass fixture shows its simple, substantial and practical construction. No insulating joint, canopy insulator or splicing of wires are required.

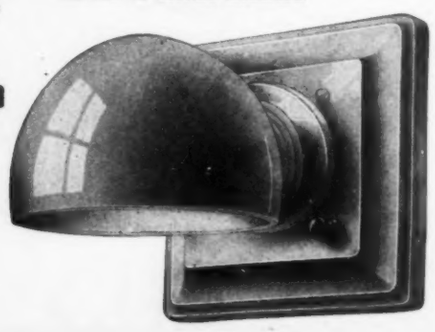


A particularly pleasing unit for installation above a dressing table, or above mirrors in bathrooms, producing ideal illumination for this service. The receptacle provides a convenient means for attaching electrical devices, such as curling iron heaters, vibrators, hair-dryers, etc.

AGLITE all-glass fixtures are perfectly insulated, rendering them "shock proof" and making them desirable for service where dampness exists.



The strength of AGLITE all-glass fixtures is surprising. They will not crack, check, discolor or become tarnished.



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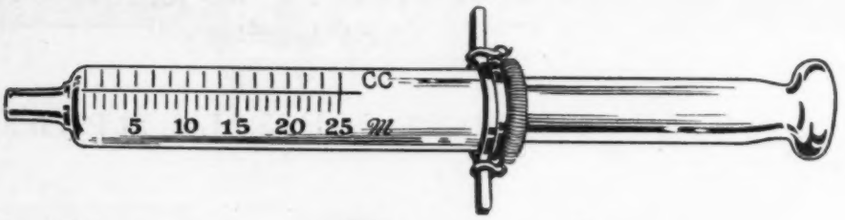
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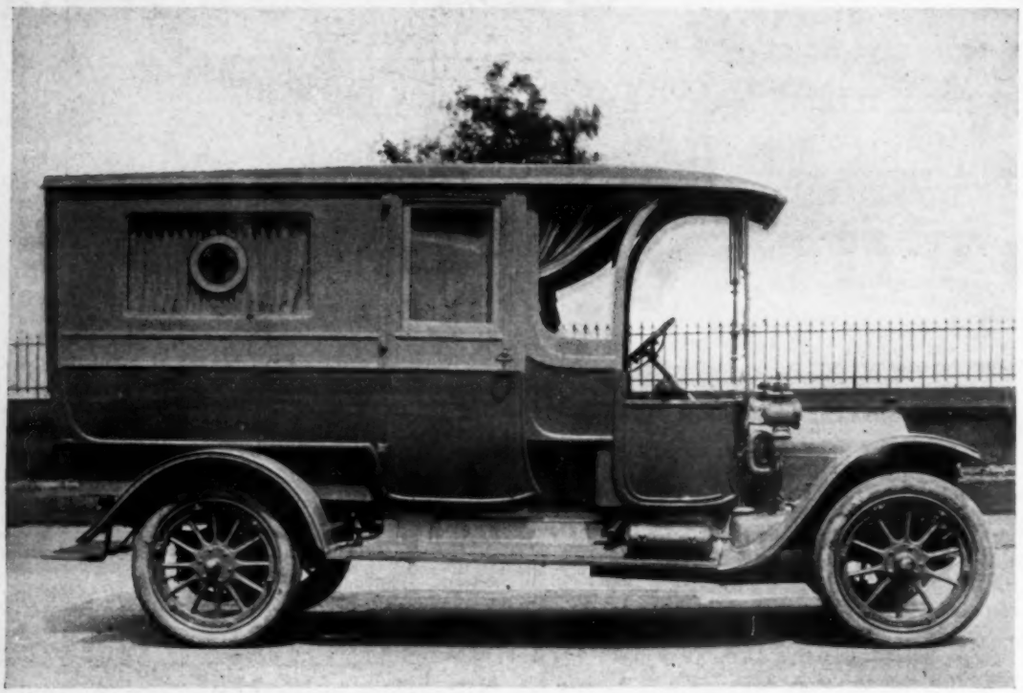
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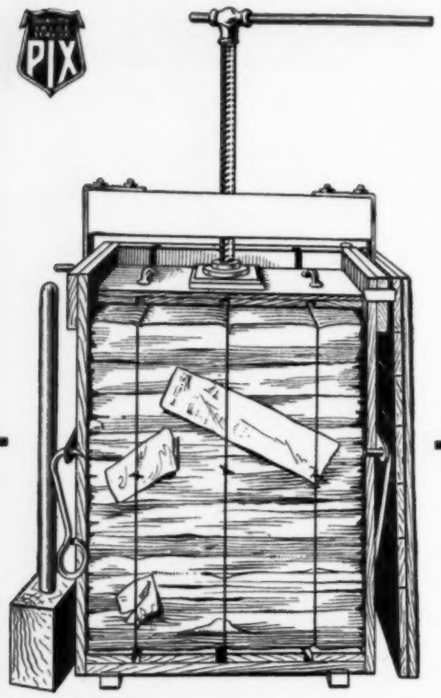
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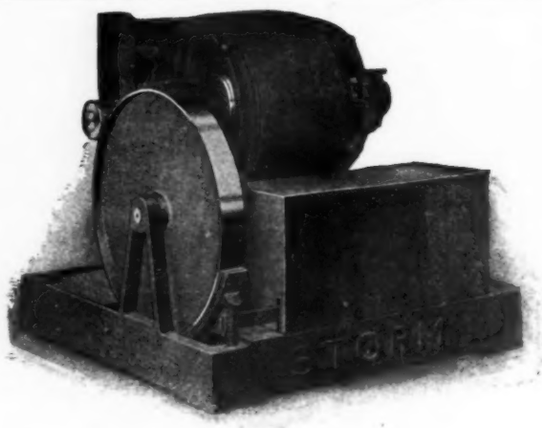
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Send for description and prices

FAULTLESS CASTER CO.
EVANSVILLE, IND.



Full Size Socket
for 11/16-inch
tubing



Cross Section
Full Size
Made in nickel, brass, copper and oxidized finishes.

FULL SIZE
Note Strong
Steel Construction



Silent Call System

FOR CALLING NURSES

We were the pioneers and always will be. This system completely installed COSTS LESS than the bare apparatus of other signal systems.

It is positive.	It is economical.
It cannot fail.	No upkeep charges.
It cannot get out of order.	No springs.
	No transformers.
It is quiet.	No motor generators.

Approved by the National Board of Underwriters. Write for pamphlet, wiring diagrams, and specifications.

THE ONE PERFECT SIGNAL SYSTEM
Installed in over 200 Modern Hospitals

MADE BY
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Designed for Ready Reference and for Convenience in Ordering

SAFETY-TRIUMPH Aseptic Glass Syringes are made of selected tubing, prepared under a special formula, and the glass is chosen for accuracy of the inner wall, which consideration insures a reliable syringe when finished.

Triumph Syringes are made in a wide range of styles and sizes which adapt them to various uses, as will be seen from the cuts shown on the hanger which we offer you.

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INSTRUMENT MAKERS
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"EACH patient in our hospital has an individual locker in which his clothing and medicines are kept. This insures safety and sanitation, besides saving the time and energy of our nurses."

BERGER'S STEEL LOCKERS

will prove a big convenience in your hospital. They are fire retardant, require small space, attractive in appearance, admit ample ventilation, reasonable in cost and give long service. They may be readily sterilized whenever required

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EQUIPMENT
WHEEL CHAIRS
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SICK ROOM FURNITURE

A very high grade of specially made Vehicles for Hospitals and Sanitariums. *Catalogue*

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St. Barnabas 321-3X6

A Word to the Hospital Superintendent

There are three essential reasons why we believe

Curity HOSPITAL GAUZE and ABSORBENT COTTON

Will satisfy your requirements

FIRST: Fifty-four years of manufacturing experience have enabled us to establish the Standard of Quality for these products.

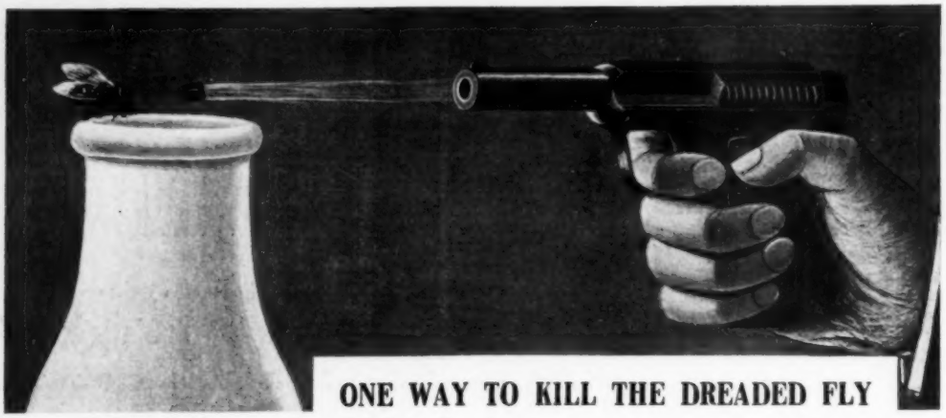
SECOND: The fact that we supply the majority of the leading hospitals of this country is a convincing testimonial of Curity **EXCELLENCE.**

THIRD: Prompt attention to orders is assured by our efficient mill service, supplemented by stocks carried at our branch offices.

Samples and Quotations Supplied on Request

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ONE WAY TO KILL THE DREADED FLY

But it is not recommended.

The really effective method of combating the fly nuisance is to destroy them in egg or larvæ form.

Two ounces of 20 MULE TEAM BORAX, applied to the garbage can, and 10 ounces applied to 8 bushels of manure and sprinkled with water will prevent **millions** of flies.

20 MULE TEAM BORAX, while not a poison, is repellent to all bacteria-carrying insect life. Mixed in equal parts with powdered sugar, it will drive roaches from pantries, drains, and other breeding places.

It is an inexpensive mineral powder, with a hundred cleansing and antiseptic uses in the hospital. Write for our booklet, "The Magic Crystal."

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CHICAGO NEW YORK OAKLAND, CAL.

VAN'S HOSPITAL FOOD CARS



CONVENIENT *and* ECONOMICAL

These Food Cars are convenient because the food is readily brought to the patient's bedside in a hot and palatable condition in a way that cannot be done with a tray.

These Food Cars are economical because they save time in conveying food to the patient, and because he may then select such parts of the food as he desires, avoiding the waste that occurs when serving with trays containing more than is wanted.

The cars are light and easy-running, with rubber-tired casters, and are made in any size required.

THE JOHN VAN RANGE COMPANY

Fifth Street and Broadway **CINCINNATI, OHIO, U. S. A.**

Also Manufacturers of Hospital Kitchen Equipments



DURIT
RUBBER SHEETING
MAROON COLOR
SINGLE OR DOUBLE COATED
WIDTH 36 TO 54 INCHES

3 year GUARANTEE

Judge This Heavy Service Sheeting Not by *First* Cost, but by *Average* Cost Per Year

The original cost of "DURIT" is about twice that of ordinary sheeting—but it will last three times as long under the same conditions of service—an actual saving in cost of 33⅓%. We fully guarantee "DURIT" not to crack, peel, harden, or discolor, through contact with urine, acid or water.

"DURIT" is recommended as a very economical sheeting for general hospital use—and because of its great wear and tear resistance is particularly desirable for extreme conditions of service and climate.

The genuine "DURIT" Rubber Sheeting may be had only from us, as well as the lighter and very dependable "MADISON" Sheeting. The latter is extensively used because of its remarkable mangling and washing qualities. Send for samples and prices.

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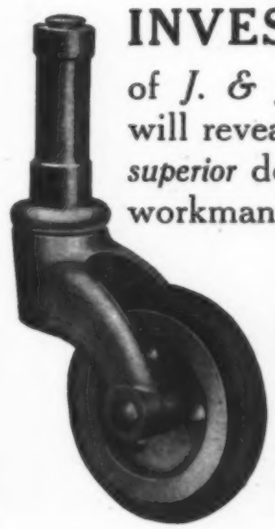
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Inner Braced Furniture
Never Has A Loose Joint

Invisibly Steel Reinforced As A Modern Building 17 Inches of INNER BRACED Chair Hitched to ½ Ton

Catalogue Explains
THE INNER BRACED FURNITURE CO.
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WHY? BECAUSE!



INVESTIGATION
of *J. & J. Hospital Casters* will reveal that they are of *superior* design, quality and workmanship.

Extreme care is given to every detail in their construction.

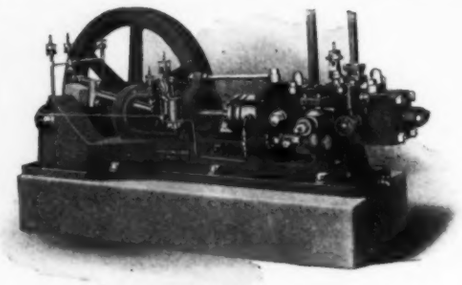
Their adoption means economy to Hospital, less work for nurses, more comfort to patients.

Be sure to specify them in your orders.

Descriptive circulars gladly sent on request.

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Manufacturers of Superior Hospital Casters and Wheels
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That mechanical refrigeration is the most satisfactory and economical system for the hospital is now generally known and understood. That



The KROESCHELL Carbonic Anhydride System

is the most efficient and satisfactory system of mechanical refrigeration on the market is conclusively proven by the number of these systems in use among large and small hospitals everywhere.

The KROESCHELL System is more compact and requires less space than other systems. It is simple in construction and easy to operate. Carbonic anhydride is safe and odorless, and is neutral toward all materials and foods. It is far less expensive than ammonia.

This system is adaptable to all refrigeration requirements; being adaptable for keeping meats, vegetables, and dairy products in perfect condition; freezing ice creams and producing clean ice at a minimum cost; cooling drinking water and preserving a definite temperature for serums and specimens; and cooling patients' rooms and wards to a comfortable temperature on the hottest days.

The principle of the KROESCHELL System is this: Carbonic anhydride (CO_2) gas is compressed in the compressor (one is shown in the illustration), and passes to the condenser, where it is cooled and liquefied, and then expanded to gas in coils, where the cooling process takes place by its absorption of heat. The gas is then compressed again, and the action repeated.

For the most efficient, economical, and satisfactory refrigerating system for your hospital, send for booklet, "Hospital Refrigeration." Write

Kroeschell Brothers Ice Machine Company

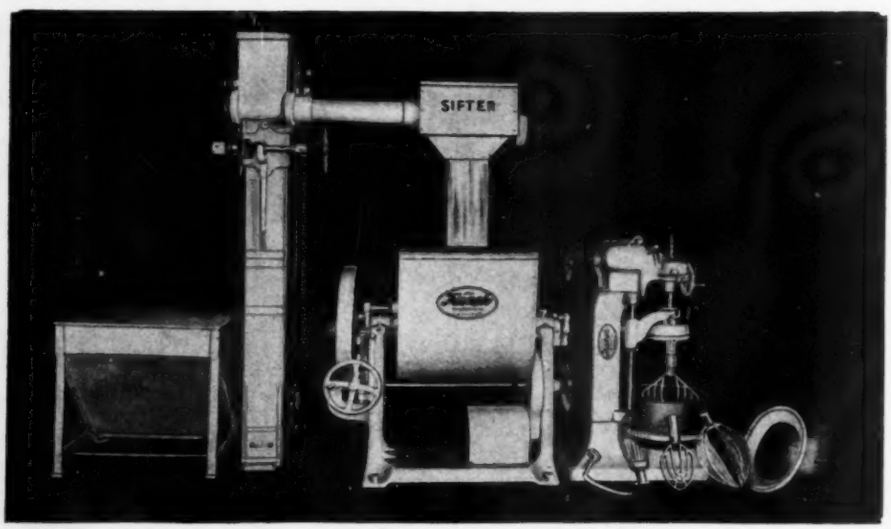
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A Sanitary Bake-Shop Outfit

Consisting of Flour Storage Bin an Elevator and Sifter, a Bread Dough Mixer and a Cake Mixer.

With added attachments, cake mixer can be used for mashing potatoes and many other vegetables and fruits.

Cannot be excelled in beating up eggs, cream, mayonnaise dressing, etc.



Floor space about 16 x4'. Weighs 4,500 pounds.

THE TRIUMPH OUTFIT

This is the best equipment for the baker in the market today. His greatest aid in producing pure, uniform quality goods. Note, one motor operates all. Each can be started or stopped without shutting off the power. All finished in white enamel.

For further information write

THE TRIUMPH MFG. COMPANY **3400 Spring Grove Ave., Cincinnati**



ASPARAGUS

Freedom from undue bitterness and a dependable tenderness of stalks and tips mark Califo Brand Asparagus as being particularly desirable for hospital use. Its known diuretic action makes it an excellent addition to the menu of certain patients.

CALIFO BRAND FOOD PRODUCTS

constitute a complete line of high-test fruits, vegetables, and specialties prepared under most exacting conditions and in scrupulously clean and sanitary establishments.

We are now booking contracts for Fall and Winter delivery for season of 1916-1917
Correspondence solicited

THE COAST PRODUCTS COMPANY

406-408 Market Street, SAINT LOUIS

DISTRIBUTING WAREHOUSES

CHICAGO	KANSAS CITY	OMAHA
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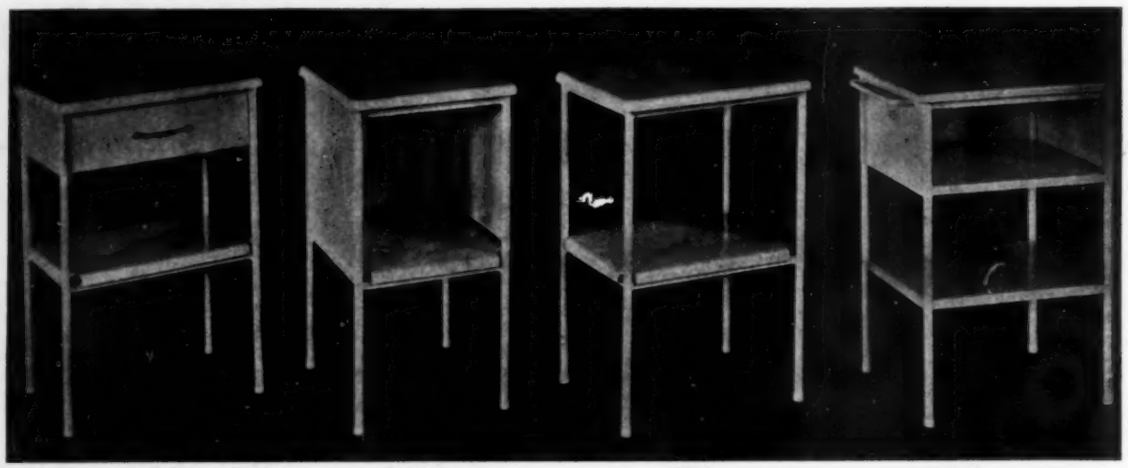
ALSO EXCELLENT FACILITIES FOR DELIVERIES ON EITHER ATLANTIC OR PACIFIC COASTS

FREIGHT PAID TO ANY RAILROAD STATION IN THE U. S. A.

"PROVEN BEST BY THE CAN-OPENER TEST"



Bernstein Quality Hospital Furniture



3326 3316 3306 3338

Smooth-Welded Frame Bedside Tables

Among the various pieces of modern hospital equipment which we installed in the Columbia Hospital for Women, Washington, D. C., the BEDSIDE TABLES illustrated above are of special interest to those who are connected with the administration of hospitals. These smooth-welded frame Bedside Tables are made with removable top and shelf of porcelain iron, porcelain steel, monel metal, or regular baked enamel painted steel, as may be preferred. All of the tops and shelves on our 16x20-inch Bedside Tables are interchangeable in these new types, so they can be used in different parts of the hospital and the tops and shelves changed from one to the other, as may be desired.



3107

Improved Dressing Carriage

The Dressing Carriage illustrated here is of the kind we also installed in the Columbia Hospital for Women. It has very heavy gauge top and shelf of monel metal. The carriage is of our latest improved smooth - welded construction, and is mounted on our extra heavy reinforced wheels, having 1¼-inch rubber-cushioned tires. The double tier guard rail encircling both top and shelf is arranged for the purpose of preventing articles from slipping through the lower rail.

BERNSTEIN MANUFACTURING COMPANY

Makers of High-Grade Aseptic Hospital Furniture, Sterilizing and Disinfecting Apparatus, Metallic Bedsteads and Bedding

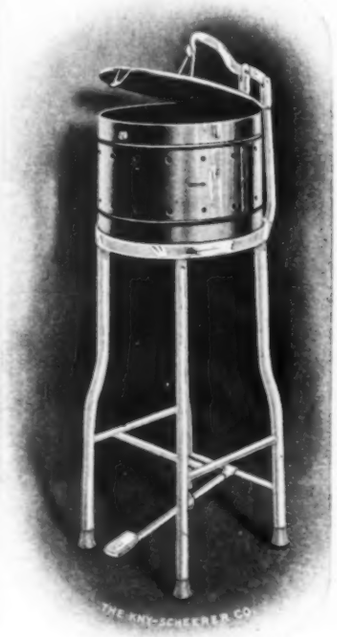
3rd and Allegheny Avenue PHILADELPHIA

SEND FOR CATALOGUES

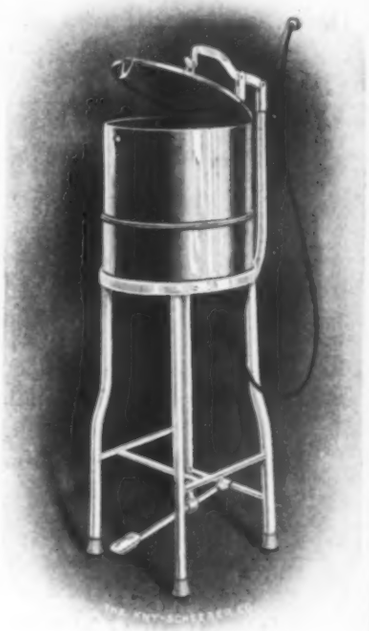
CAUTION

Does your technic minimize the exposure of your Dressings and Towels after sterilization? If not, the K. S. Sterilizing Drums will solve the problem. They close dust-proof and are securely sealed by a special device. They are strongly constructed to withstand hard usage.

Send for Bulletin 168, Sterilizing Drums.







The Kny-Scheerer Corporation

The largest manufacturers of surgical requirements

404-410 West 27th Street NEW YORK

We are the sole manufacturers of the Genuine Hawley Fracture Table and the Genuine Albee Operative Bone Sets. Send for new illustrated booklets.

Hospital patients appreciate



O'Sullivan HEELS

So do hospital doctors and nurses.

For O'Sullivan's Heels of new, live rubber not only avoid the harsh, noisy step so annoying to the sick and suffering, but through their relief of "foot soreness," lessening of fatigue, and decrease of nervous exhaustion, substantially promote the comfort, health and efficiency of those who minister to the afflicted.

Doctor, are you wearing O'Sullivan's Heels?

They surely embody a physiologic principle that must appeal to you.

Get a pair today—and conserve your energy!

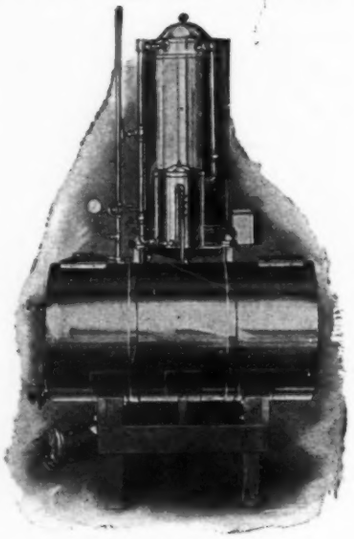
O'Sullivan Rubber Company, New York City

Surgical—Laboratory—Drinking

It is economical to combine these particular water needs in a single apparatus investment and single operating expense with a

Kennicott-Polar Water Distilling System

In some of the recent hospitals these highly perfected stills are automatically producing a water that is not only perfectly sterile, but free from all organic or mineral matter—and besides, equal in taste to any of the best known table waters. It is being sold in bottles in hundreds of cities.



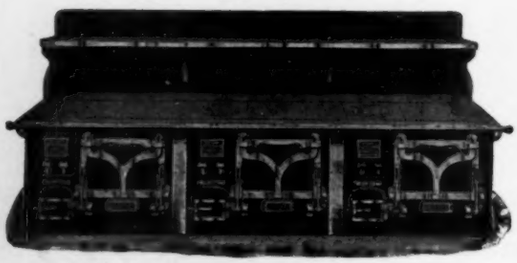
These ideal hospital outfits comprise a distilling unit with double storage tanks—one for operating room with temperature control and the cold tank for laboratory, drinking and cooking. The entire storage and piping is easily and thoroughly sterilized as often as desired. The plant is entirely automatic. A size for every hospital or laboratory.

We also build water softeners and filters in any capacity. Write for literature.

THE KENNICOTT COMPANY
1400-1410 Corn Exchange Bank Building CHICAGO

QUALITY KITCHENS

KITCHEN OUTFITS BURTON STEEL RANGES



BURTON 12-FOOT FRENCH RANGE

"Burton" Equipment is built for heavy hospital duty.

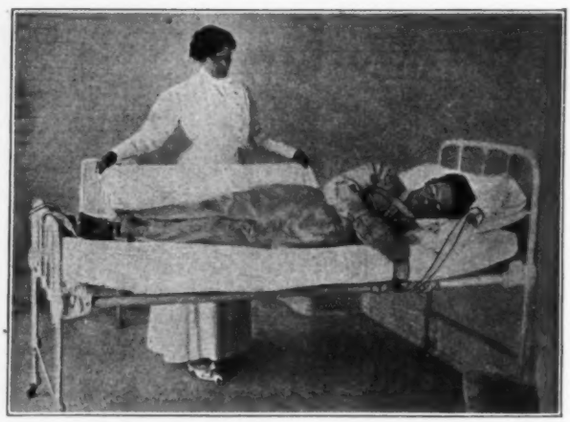
"Burton" Kitchen Design means economy and efficiency.

Let "Burton" design and equip your kitchen for you.

THE BURTON RANGE CO.
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McCALMONT HUMANE RESTRAINT

Patented



Linen being changed while patient is under restraint

Safe—Sanitary—Sane

Use This Device and Avoid Fatalities in your Institution

On demonstration in the Permanent Model Hospital Exhibit of the

National Hospital Bureau, Inc.
8 West 40th Street NEW YORK

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IM-PER-ME-PHANE

TRADE MARK REG. U.S. PAT. OFFICE



at the front, and in the foremost hospitals of the world has proven its value as a surgical dressing.

New Price List Effective April 1, 1916

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Hospital	pkgs. containing	10 sq. yds.	$3.50
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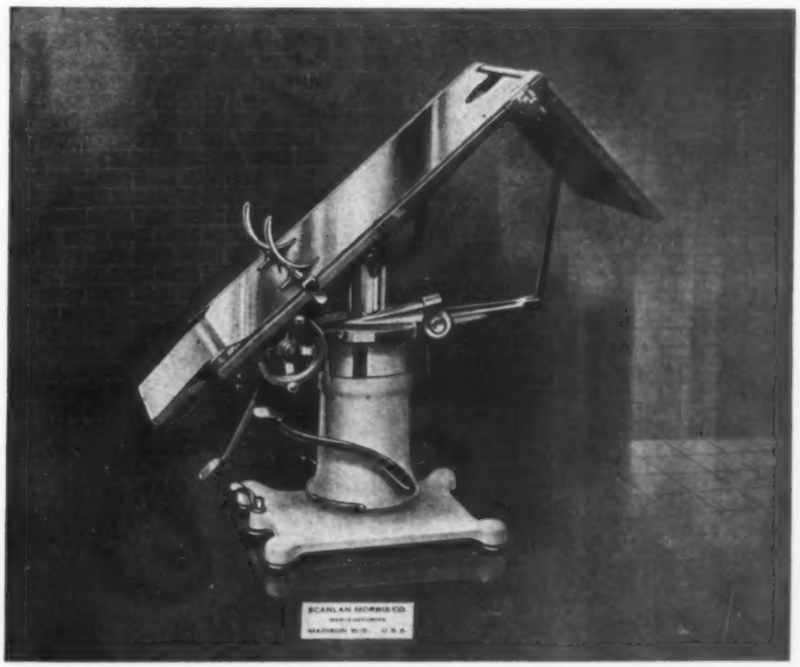
Manufacturers of Hospital Supplies of Merit

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BALFOUR TABLE

Minnesota Operating Table No. 4



"THE WHITE LINE" HOSPITAL FURNITURE *and* STERILIZING APPARATUS

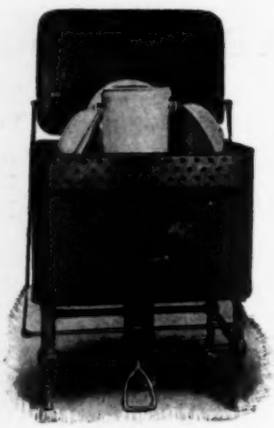
SCANLAN-MORRIS COMPANY

MADISON - - - - - - - WISCONSIN

BY a pressure of the foot the cover of the *Barnstead Utensil Sterilizer* opens wide; and at the same time the automatic lift causes the tray and contents to rise. When the cover is closing, the tray recedes.

The mechanism is simple in construction, and the whole apparatus is easily and quickly cleaned.

MADE and sold by the Barnstead Water Still Co., 51 Chardon St., Boston.



SEND for catalog of Water Stills, Sterilizers, and other hospital needs.

Have you thought of these points regarding silent call systems?

With

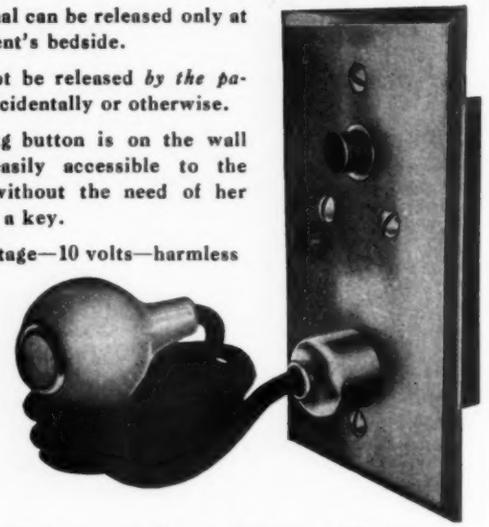
The Levison Silent Call Signal System

The signal can be released only at the patient's bedside.

It cannot be released *by the patient*, accidentally or otherwise.

Releasing button is on the wall plate, easily accessible to the nurse, without the need of her carrying a key.

Low voltage—10 volts—harmless



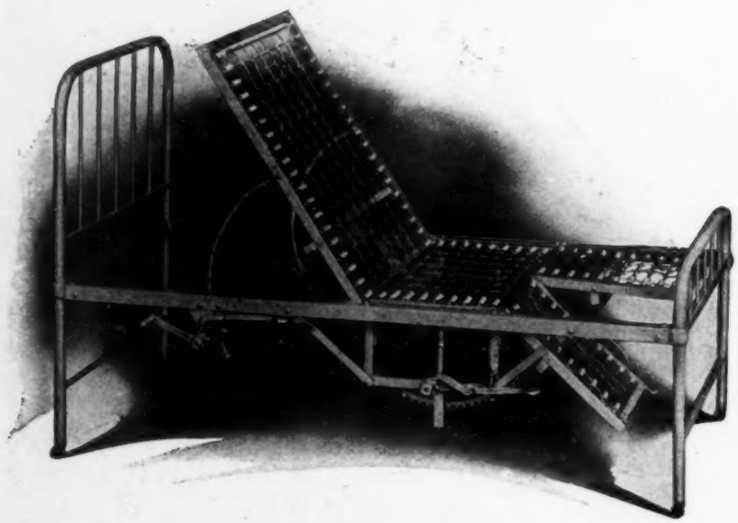
Silent

Trustworthy

Safe

The Chicago Signal Co., Chicago

THE WALLACE ADJUSTABLE BED



The Ideal Bed for Hospitals

Can be quickly and easily adjusted to any position desired, without moving the patient. This means comfort for the patient, convenience for the attending physician, and less work per patient for the nurse

See Our Agents—Your Local Surgical Supply House—for Demonstration and Prices.

Wallace Adjustable Bed Sales Company

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Grueby NON-SLIP Impervious FLINT Tiles for FLOORS

Safe. Sanitary. Silent. Indestructible.



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Edward T. P. Graham, Architect

This altogether unusual benefaction is dedicated to the free care of teeth for Boston children.

Grueby Non-slip Impervious Flint Tiles in corridors, halls, etc.

Walls and Floors in children's waiting room in Grueby Dull Finish Tiles.

The Forsyth Coat of Arms in Grueby Opus Sectile.

Visitors are welcome.

Ask authorities how they are pleased with Grueby installations.

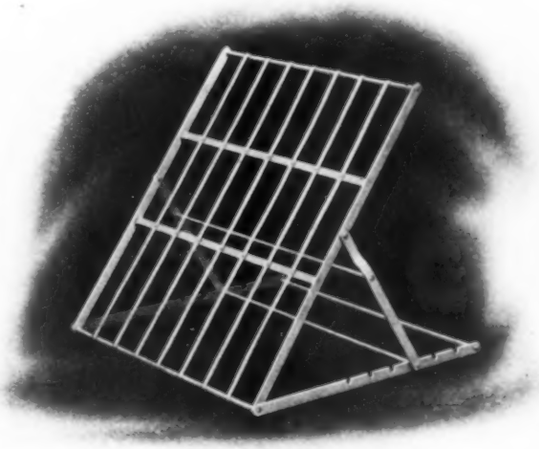
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"FAULTLESS"
Aseptic Hospital Equipment

17th St. and Indiana Avenue PHILADELPHIA



No. 6250

ALL STEEL BACK REST. Steel frame and flexible steel slat construction. Finished in white enamel.

The New Wesley Hospital of Kansas City

Messrs. Keen & Simpton Architects
Equipped by Samuel Fletcher Kansas City, Mo.



Selects

MONARCH Metal Weather Strips

THIS new building, opened January 1, 1916, represents the most advanced thought in the design, construction, equipment, and service of a hospital plant. Whatever modern science is able to contribute to sanitation, efficiency and economy of operation, and the comfort of patients and staff has been given incorporation.

MONARCH METAL WEATHER STRIPS were selected because they are effective agents in controlling ventilation and heating, and promoting cleanliness. They are a permanent investment—unwearable, unbreakable, and rust-proof.

They can be installed on any window or door, and are self-adjusting to any shrinking or warping in sash or frame. They prevent the entrance of dust and soot; keep out cold, so that heating expense in winter is reduced between twenty and forty percent.

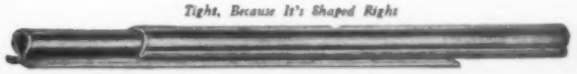
Licensees everywhere who will give demonstration and estimate of cost of installation without any obligation on your part.

Write us for FREE booklet, giving further facts about the MONARCH Strips. Copiously illustrated with views of many hospitals and other public institutions now using MONARCH Strips with perfect satisfaction.



Monarch Metal Weather Strip Co.
4124 Forest Park Boulevard St. Louis, U. S. A.

Tight, Because It's Shaped Right



We Specialize on Institution Beds

We center every effort of our organization on the production of Metal Beds, Springs, and Hospital Furniture for general institutions. Will be pleased to quote prices on application.



A112—WHITE ENAMEL.

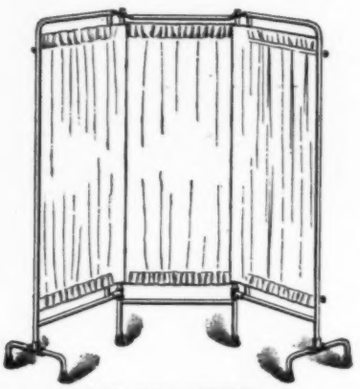
Pillars, 1 5/16 in.
Filling, 3/8 and 1 1/16 in.
Head, 48 in.
Foot, 36 in.

Sizes: 3 ft., 3 ft. 6 in., 4 ft., and 4 ft. 6 in.
Fabric, Heavy double weave.
Ribs, 1¼ in. apart.

Weight (6 ft. 3 in. long by 3 ft. wide), 116 lbs.
Height from floor to top of spring, 23½ in.

THREE-PIECE BED ON STEEL ANGLE FRAME—STANDARD RAIL CONNECTION.

Made with Adjustable Back Rest, unless otherwise ordered.



A126—BED SCREEN.

Small Size:	Large Size:
Height, 5 ft.	Height, 5 ft. 6 in.
Width, open, 5 ft.	Width, open, 7 ft. 6 in.
Width of wing, 1 ft. 8 in.	Width of wing, 2 ft. 6 in.
Frame made of 5/8-in. tubing.	Rubber tips.
Curtain rods, ¼ in.	Shipping weight, 25 lbs.
White enamel.	In ordering give size desired.

SMITH & DAVIS MANUFACTURING COMPANY

Manufacturers of High Grade Institution Beds and Hospital Furniture

1925 Locust Street — ST. LOUIS, MO.

AFTER DUE CONSIDERATION



This Old-fashioned Doctor concludes that

FRIES BROTHERS'
M'f'rs. 92 Reade Street, New York

"Kelene"

(Pure Chloride of Ethyl)

Is the most reliable and effective

Local Anesthetic

PUT UP IN NEW GLASS TUBES ONLY
READY FOR INSTANT USE

Harmless, no matter how frequently repeated. Easily applied and with uniform results. Easily portable.



"KELENE"

in General Anesthesia an Adjuvant to Ether

See GOLD MEDAL Awarded

Sole Distributors for the United States

MERCK & CO. New York Rahway St. Louis



Any

area of shade at any altitude—

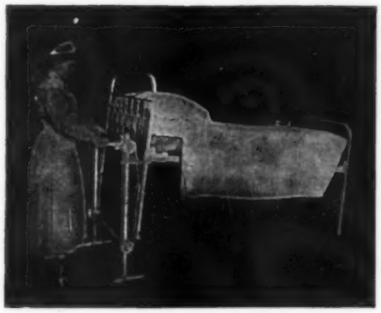
permitting ventilation or light to come from the top as desired.

This means much to the patient's eyesight, health and comfort.

Send to us for descriptive circular of our shades

LUTHER O. DRAPER SHADE CO.
Spiceland, Indiana

THE ERNEST BED JACK



Can Be Operated by One Nurse

The Ernest Bed Jack is the new device by which either end of the bed of a patient can be easily, quickly, and securely elevated to any desired angle for comfort or for any surgical or medical position. The mechanism is simple, strong, and durable, and can be operated by one nurse without any special effort.

The Ernest Bed Jack has been installed by the Mercy Hospital, Chicago, the German-American Hospital, New York, and other institutions.

The Bed Jack will be sent, express prepaid, for 30 days' trial, so that its efficiency may be thoroughly tested without any cost to the institution.

ERNEST BED JACK COMPANY
3551 Sheffield Avenue CHICAGO

BAYONNE ROOF AND DECK CLOTH

Hospitals Prefer BAYONNE

The economy of BAYONNE makes a particularly strong appeal at this time of rapidly rising prices of copper and other metals. At present this unreasonable cost is one of the gravest objections to copper as a roof covering.

BAYONNE

is rendered absolutely waterproof by our patented process—it can therefore be kept ever clean and sanitary by simply sluicing it with water.

Besides, it does not contract and expand like copper—nor does it crumble, blister or warp as tar and other prepared coverings do.

It is less expensive and very much simpler to lay—and it stays positively flat when once laid.

BAYONNE combines with these advantages an unequaled resiliency and softness—deadening the noise of dripping rain and footsteps.

Preferable to linoleum for floor and aisle covering.

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Branch House—202-204 Market Street, St. Louis
Also headquarters for
Bleached Gauze, Bandage Muslin, Crash Toweling, etc.



Elbow Type — For Clinic Lavatory

Niedecken Mixer

Patented

The Perfect Mixing
AND
Anti-Scalding Valve

For Shower, Lavatory, Bath, Shampoo, Etc.

No Cams No Springs

Removable Bronze Seats

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SAN E QUO

Hospital Equipment

Electric Light Bath Cabinets
Automatic Exerciser
Solar Arc Lamps
Photophore and Thermophore Apparatus
Hydrotherapeutic Apparatus
Sinusoidal Electric Apparatus
Vibratory Apparatus
Massage and Exercise Tables, etc.

Developed and Perfected for Use in

The Battle Creek Sanitarium

—the headquarters of Physiotherapy—where these methods of treatment are being used with increasing success. *Sanequo* Therapeutic Appliances are fully described in our illustrated catalog sent FREE on request. Use the coupon ☛

Write your name in the margin, tear off, and mail to us

SANITARIUM EQUIPMENT COMPANY,
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Send your illustrated catalog describing equipment checked in spaces below:

[ ] *Sanequo* Electric Light Bath Cabinets.
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"A PERFECT REST"

The "MERCY-REST" gives the patient the position "that just fits."

The *patient* in bed or the *nurse* can work it—*"EASY."* There are no "gears," "ratchets," or "dogs" in it to grind or trip.

The "MERCY-REST" is easily attached to brass or iron beds, is never in the way, and is always ready for use.

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are staunch, rigid, and easy-running—a comfort to the occupant.

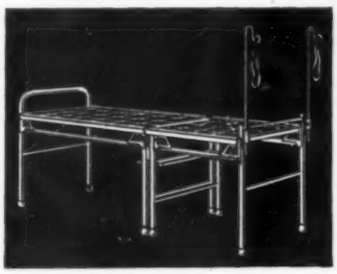
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STEEL
Hospital Furniture and Bedsteads
OF
Distinctive Character and Quality

Originators of Flush Joint Construction for Hospital Equipment, eliminating bulky castings and crevices which collect dust and germs.





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Manufacturers of
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CREASEY ICE BREAKERS
In Every Ward

will save the time of your nurses in breaking ice for cold compresses, icing food and drinks and other purposes, and avoid the scattering and waste of ice and muss inseparable from breaking ice with a hand pick or hammer.

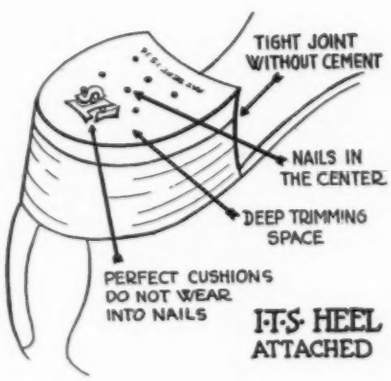
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Concave-Convex Perfect Cushion Rubber Heel

Colors—Black and Chocolate



This is the first Concave-Convex Heel ever put on the market, and is a heel of the highest grade.

The tension of the heel when flattened makes a tight joint with the heel base. It cannot mar polished floors.

Under the trade-mark I. T. S. in the illustration is a slight concavity, which forms a cushion to relieve the heel jar in walking on tiled floors or stone walks.

The Cushion Chamber, aided by the resiliency of the rubber, gives a spring to your step unequaled by any other heel.

Ask Your Shoemaker for I. T. S. Heels

A pair mailed to any address on receipt of 25 cents in **COIN** and paper pattern showing size of heel to be fitted. Also state whether the heel is of wood or leather.

A neat booklet, giving full description, will be sent on application.

THE I. T. S. RUBBER COMPANY
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THE manufacture of malt preparations for medicinal use is a highly specialized professional work, and is successfully accomplished only under the direction of competent chemists. While in some respects similar to the brewing of beer, there are vital differences both in the materials which enter into these products and the processes of manufacture.



ANHEUSER-BUSCH'S
Malt-Nutrine
TRADE MARK.
the food-tonic

is the recognized standard of medicinal malt preparations of its class. The materials used in its manufacture are specially selected and safeguarded. Only the choicest Barley-malt and Saazer hops are used, and the finished product contains all of the soluble substances of these two materials.

Malt Nutrine is a perfect malt preparation, and should not be confused with cheap dark beers, many of which are represented to be medicinal malt products.

For the hospital patient, physician, or nurse who is in need of a refreshing, appetizing, nourishing and mildly stimulating liquid food, ***Malt Nutrine*** is most serviceable. It is low in alcohol strength (less than 2%), but high in food value (14% of the solids extracted from malt and hops).

Pronounced by the U. S. Internal Revenue Department a PURE MALT PRODUCT, and not an Alcoholic Beverage

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Visitors to St. Louis are cordially invited to inspect our plant

Institution Beds

Having Malleable Iron Locks

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Quality First Consideration

Well constructed and finely finished. Made with either Woven Wire or Link Bottom as preferred. High grade casters

Send for Catalog and Prices

Union Wire Mattress Co.

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In the interest solely of our customers and ourselves we have reduced prices on W. F. C. waterproof fabrics from 20% to 30%.

THE REASONS

1st. The heavy demand for W. F. C. waterproof fabrics enables us to buy in larger quantities and at better prices.
2nd. All chemicals used in the W. F. C. process are now made in the United States.
3rd. We are cutting out all middlemen and in the future will sell direct to the consumer.

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If you have used W. F. C. Fabrics, you know they fulfil all our claims, which are as follows:

Contain no rubber. Are sanitary, durable, soft, and pliable. Non-inflammable. Can be sterilized with boiling water and pressed with an iron without injury. Cooling and pleasant to lie on. Will not blister nor irritate a patient. Will not mildew. Impervious to blood, urine and other bodily excretions. Resist to a surprising degree ether, chloroform, sulphuric, nitric and other acids. Can be stitched the same as other fabrics. Will not crack nor peel off. Preserves the fabric and adds greatly to its strength.

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The convalescing patient insists on soft, resilient, comfortable beds. You are sure to satisfy with "Dixie," **the Mattress that Breathes.** "Dixie" also makes hair, cotton felt, silk floss, and compartment mattresses, box springs and pillows. Write for complete descriptive literature.

Let DIXIE help you solve your bedding requirements. At our Chicago office experts who have helped equip hundreds of institutions are at your service.

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EXAMINATION of water and milk supply, their purification and control.

EXAMINATION of all kinds of food for purity, quality, and wholesomeness.

SPECIAL TESTS on flour to determine its market and food value.

DIABETIC FORMULAS and balanced rations scientifically prepared as the case may require.

CONSULT US before selecting diabetic and other health breads.

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SEND YOUR *pathologic specimens* to us for diagnosis.

WE CAN ASSURE you a valuable and prompt service.

WRITE FOR INSTRUCTIONS and fee table.

LET US MAKE complete examinations in *post-mortem* studies.

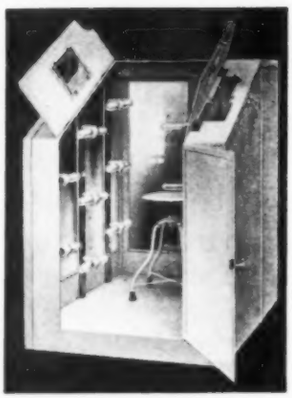
ASK FOR ADVICE in cases of *suspected poisoning* and toxicological work.

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We make a specialty of examining drugs and medical preparations for purity, strength, and composition.

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Combine Therapeutic and Business Efficiency



THAT is the ideal of the Modern Hospital and Sanatorium. Satisfactory Therapeutic Results must be accompanied by *Sound Business Methods* to secure a *Healthy Growth* and *Financial Independence.*

THERAPEUTIC EFFICIENCY depends to a marked degree on the equipment of the institution.

BUSINESS EFFICIENCY covers not only the conduct of the Hospital or Sanatorium, but the Attractiveness of the Institution to prospective patients.



Electric Light Bath Cabinets

will increase both your Therapeutic and Business Efficiency. Our Bath Cabinets are found in Institutions in every part of the country. We make more Electric Cabinets than any other firm in the world. A proof of the superiority of our cabinets lies in the fact that the leading Hydrotherapeutic Supply Houses daily furnish our cabinets under their own label.

We offer a wide variety of standard sizes and styles. Special Cabinets can be made to meet the individual requirements of any institution. Furnished in steel, wood, or marble—equipped for electric lights, steam coils, live steam, or hot air. In quality we recognize no superior; in price we are virtually without competition, because, the manufacturer selling direct is best able to successfully combine quality and price.

FRANK S. BETZ COMPANY
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CALORIC FIRELESS COOK STOVES

For the economical and better cooking of all kinds of food in the
DIET AND MAIN KITCHEN OF THE HOSPITAL

They Cook Better

HYGIENIC SCIENTIFIC ECONOMIC Caloric TRADE MARK REGISTERED COOK STOVE

They Retain Flavor



They Save Time

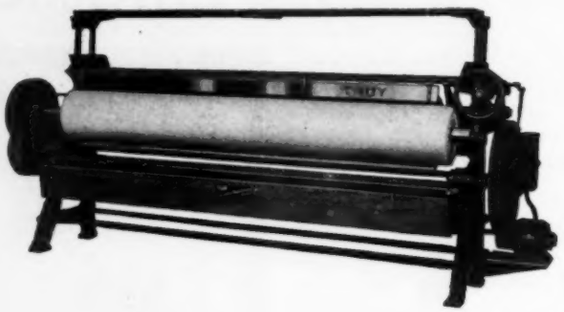
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They Save Fuel

The fact that the Caloric Fireless Cook Stoves cook more thoroughly, preserve the flavor of the food, save valuable time, and cause a great saving in fuel certainly recommends them for use in the Hospital and Sanatorium.

These stoves have so many advantages which space will not permit to be enumerated here, that we respectfully request superintendents of institutions to send for descriptive booklet giving full information and prices.

THE CALORIC COMPANY **Janesville, Wisconsin**



Troy Handy Ironer

This machine enables you to dispense with operators, as the pieces fed into the machine are returned to the feeders for folding.

It is a great space saver, as it can be set against the wall.

We recommend it for institution use.

Built in various sizes, with varying capacities.

Write for additional information.

TROY LAUNDRY MACHINERY COMPANY, Ltd.

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Do you receive our house organ, "Troy Topics"

WATSON

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Insect Screens

Frame Screens in Wood, Steel and Bronze; Roll Screens in Steel and Bronze; Wood Doors of Any Description.

"The Complete Line"

To meet an increasing demand for a better and more appropriate screen door, we have developed our

METAL SCREEN DOORS

—light or heavy construction. Made in Steel or Bronze. Full-size details on request.

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"EASY ON THE FEET"



This is the dining room of the Wisconsin School for the Deaf, Delavan, Wis. Asbestone was laid over an old concrete floor, making a new floor, sanitary and attractive.

E. W. Walker, Superintendent, writes: "Asbestone is easy on the feet. It has all the good qualities of vitrified tile without the hard, resistant tread."

MULLER ASBESTONE

The Floor That's Laid With a Guarantee

Asbestone makes an ideal floor for hospitals. Write for sample.

FRANKLYN R. MULLER & CO.

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FIG. 45

Honest materials, construction and policy for more than twenty years are the causes.

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W. T. LANE & BROTHER

Manufacturers

POUGHKEEPSIE, NEW YORK

CÉLESTINS

There Is No Vichy Except That Bottled by Us

There is no water entitled to the name and prestige of Vichy water except that bottled at the springs owned by the French Government at Vichy, France. There are three of these springs—Grande-Grille, Hopital and Célestins.

Look for the name CÉLESTINS at the bottom of the bottle. As every physician knows, the so-called artificial Vichy waters have little or no therapeutic value and use the name Vichy on account of its popularity. *Never order "Vichy"—order CÉLESTINS Vichy.*

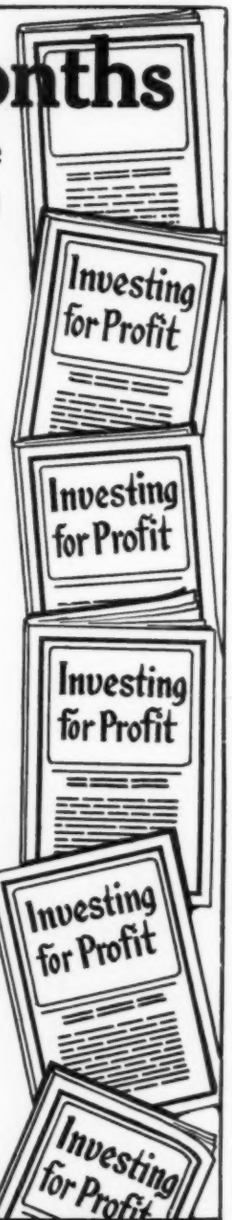


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The place of CÉLESTINS Vichy in the dietary is distinctive and important. It is an alkaline water of diuretic action, affecting beneficially the liver and stomach, checking uric acid deposits, diluting the bile, and disintegrating calculi. CÉLESTINS Vichy is indicated in cases of the following: chronic hepatic disorders; gastric and intestinal indigestion; acid dyspepsia; chronic catarrhal gastritis or enteritis; chronic nephritis; rheumatism; diabetes; inflammation of the bladder. A brief and authoritative booklet on the therapy of CÉLESTINS Vichy will be sent free on request.

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Don't invest a dollar anywhere until you at least read Investing for Profit Magazine

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Investing for Profit—A Liberal Financial Education

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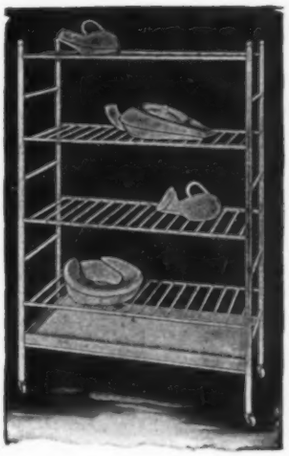
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Hospital and Institution Requisites



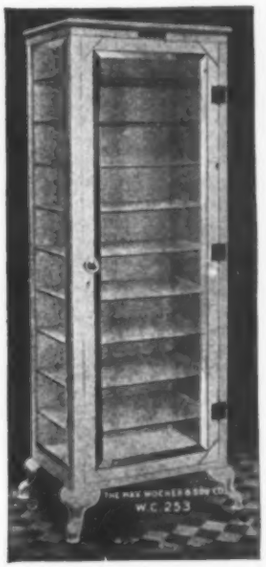
W. C. 249b. Sanitary Dressing and Linen Cabinet



W. C. 1152. Mercy Hospital Utensil Stand



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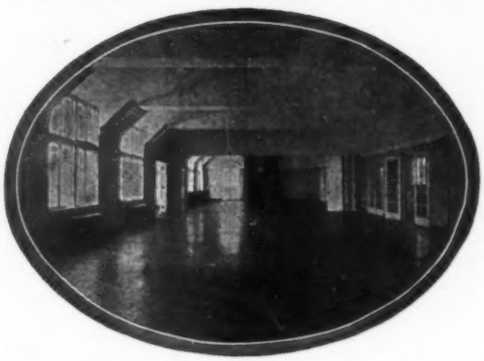
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Sanitary Furniture
of the most modern design, with Imperial baked white enamel finish.

General Supplies
Gauze, Cotton, Plaster, Rubber Sheeting, Surgical Instruments; High-Grade Rubber Gloves at Attractive Prices.

19-23 W. 6th Street THE MAX WOCHER & SON CO. Cincinnati, Ohio

A Half Million Feet

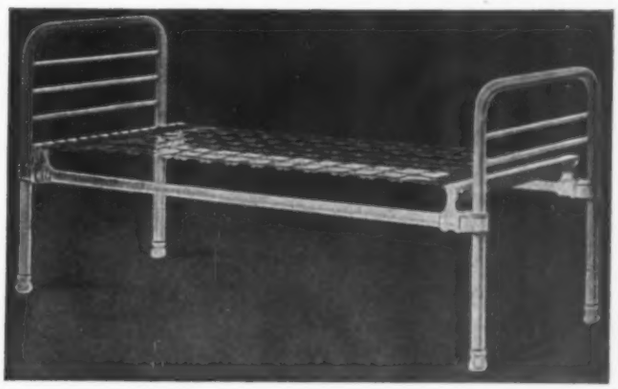


Hospital floors installed during the past year and every foot is

SANITARY
FIREPROOF
QUIET
RESILIENT
ATTRACTIVE
GUARANTEED

Manufactured and installed by the

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37 West VanBuren Street
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Foster "IDEAL"
Hospital Beds and Cribs
Used in Many Institutions

Are made strong and heavy. Three-piece construction; head, foot and springs. Springs are made with woven wire, National or Link fabric, and with angle sides or tubular sides. Malleable corner connections assure strength, rigidity and convenience in setting up.

We show many patterns in our catalogue and make special beds to any specifications. Write for a copy of our special institution bed catalogue.

No. 309
Tubing, 1 5/16 inches; cross rods, ⅝ inch. Regular height of head, 36 inches; foot, 32 inches; spring, 17 inches from floor. The spring can be placed higher from floor, on special orders, by making the head and foot higher, at a small extra charge. Regularly furnished with "Q" National spring, as shown.

Foster Bros. Manufacturing Co.
Utica, N. Y. St. Louis, Mo.

What Are You Paying for?

For results, of course, but in your washing and cleaning are you getting real sanitary conditions? When you use

Wyandotte Sanitary Cleaner and Cleanser

you always get sanitary results, and you never get them at the expense of the thing washed, for this cleaner is positively harmless.

Cleanliness is not, as you know, a simple matter that needs no attention. True, the mere act of removing accumulations of dirt may not require much supervision, but the removal of organic matter, etc., is altogether different.

The possible damage resulting from the non-removal of such deposits is what makes the efficiency of Wyandotte Sanitary Cleaner and Cleanser so noticeable. It cleans clean.

Hospitals where this cleaner is used tell us they would not be without it for two to three times its present cost. We take your order just as a bank takes your money by guaranteeing to return to you a hundred cents' worth in cleaning or a hundred cents in money. And, whether or not it does this, you are to be the judge.

Indian in Circle



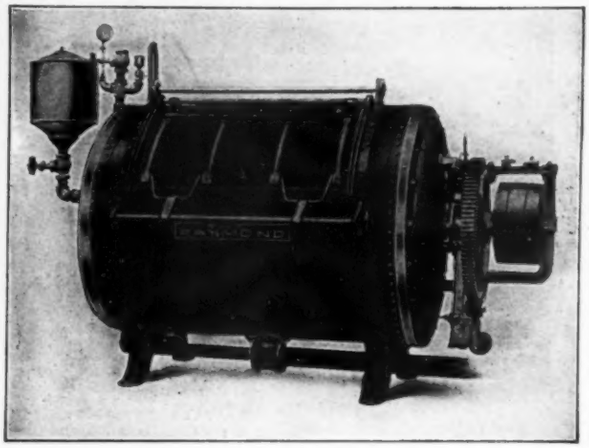
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The J. B. Ford Company
Sole Manufacturers
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This Cleaner has been awarded the highest prize wherever exhibited

Sterilize and Disinfect
EVERYTHING
You Wash Before It Leaves
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The highest grade of both dry and moist sterilization can be performed in this machine. It is smaller in size than the old type Kinyoun-Francis sterilizer and costs less, yet it does nearly the same amount of work.

Write for Catalogue

The Consolidated
Hospital Supply and Laundry Machinery Company
SAUGATUCK, CONN.

COLUMBIA SANI-STEEL INDIANAPOLIS



Columbia SANI-STEEL **Cabinets**

NOTE PRICES FOR JUNE

No. 220 Cabinet, double upper doors with plate glass and steel shelves. Size, 70x24x15 inches. Price for June, $22.50.

No. 222 Cabinet. Size, 63x19x15 inches. Price for June, $18.25.

Plate glass shelves for either cabinet at an additional cost.

MORE BROS. INDIANAPOLIS

Columbia SANI-STEEL



For those with aching feet—

For those who have weak arches, and who cannot stand long on hard floors without suffering

FOSTER ORTHOPEDIC RUBBER HEELS

offer threefold comfort—comfort to the arches when standing, comfort to the whole body when walking, and comfort of mind because of safety against slipping.

The physician who is constantly on the go, the surgeon or his assistant who stands for hours on the hard floor of the operating room, and the nurse who must hasten at every call—these and many others in hospital service are likely to find themselves troubled with the pain that comes from weak arches. They may suffer pain without being able to trace it to this cause, for it is felt often in the leg muscles as well.

When in doubt, wear Foster Orthopedic Rubber Heels. In many cases they will be found the ounce of prevention that is needed. Heavy people especially should take precautions. They are only 75 cents, attached; 50 cents by mail. (If you send to us direct, send outline of heel.)

FOSTER RUBBER COMPANY

114 Federal Street **BOSTON, MASS.**

Originators and Patentees of the Foster Friction Plug, Which Prevents Slipping

Standard X-Ray Transformers at

$550

guaranteed to be *superior* to any other make selling from 25 to 50 percent higher, and further *guaranteed* to be *dependable* at all times.



Standard Interrupterless Transformers

are the result of over twenty years' study and actual experience in the operation and manufacture of such equipment. They have been designed and built to meet the demand for a popular-priced Interrupterless Transformer capable of making perfect Roentgenograms.

Standard Transformers are the most compact transformers made for efficient Radiographic, Fluoroscopic and Treatment work. They occupy but a small space. The transformer is of the closed core construction.

The control is so adjusted that the operator can secure any degree of penetration or intensity desired from minimum to maximum.



Shipped completely assembled and ready for work after connecting to electrical supply. GUARANTEED against breaking down for five years after date of purchase.

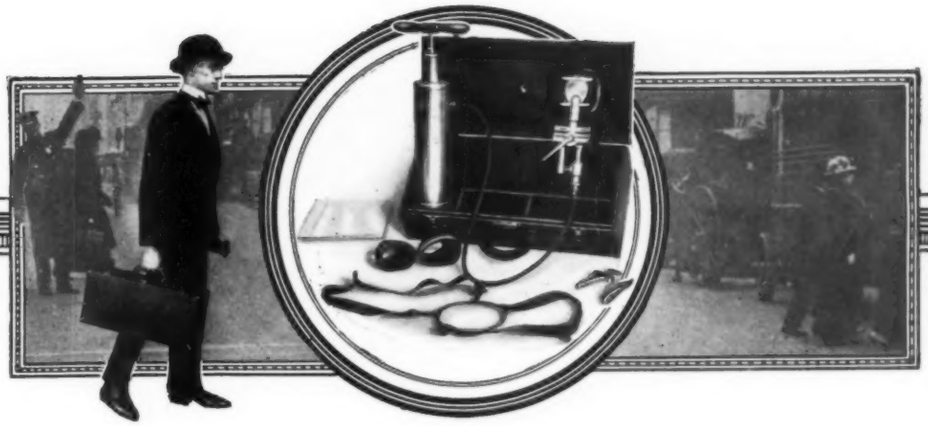
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High Frequency and Treatment Apparatus
Vertical and Horizontal Roentgenoscopic Apparatus
X-Ray Plates and Films
Stereoscopes and Diagnostic Boxes

19-21 WEST LAKE STREET : : CHICAGO



Announcing the new type B Pulmotor

Never before has a hand-operated device been constructed upon the only correct principle—*measured pressures*, instead of measured volumes which depend upon the *amount of pumping*!

Type B PULMOTOR is the first hand-operated machine *free from* the weaknesses and fatal defects of *pump*-controlled resuscitation devices.

Type B Pulmotor places the operator *at his patient's head*—not at the pump—free to devote his entire attention to the *application* of measured pressures—*"measured"* by means of the Pulmotor Control Valve—in his hands. *Indicator Gauges* show the operator the precise air pressures exerted, both of inhalation and exhalation. These indicators also show the first fluttering resumption of normal breathing. And here is another vital feature:

The patient can resume normal breathing while the mask is on — impossible with any other hand-operated device.

These exclusive, patented, Pulmotor features are so simple that anyone can operate Type B successfully. They afford such a wide range of *pressure CONTROL* that the physician may obtain any desired pressures for infant or adult. Yet they completely insure the patient's welfare and comfort.

This new Pulmotor weighs but 12 lbs., complete with carrying case—an ideal hand machine to be taken anywhere in emergency.

It may be obtained, complete for $115, a price which places it within the reach of every physician, every hospital, every public service corporation, every bathing beach—wherever that emergency use may demand. Orders for early delivery should be placed at once.



Valve (not pump) control of pressures

There's but one genuine PULMOTOR, the genuine always bears the name DRAEGER

The DRAEGER
OXYGEN APPARATUS CO.
415 First Avenue Pittsburgh, Pa.
MAKERS OF Complete Mine Rescue Apparatus
AGENTS FOR Wolf Safety Lamp Co. of America

Sunkist

Reliable Oranges for Convalescents

Oranges of the most delicious flavor. Rich, ripe, juicy, tender, sweet. Real food, in Nature's Purity-Packages. Forever one of Nature's healthful delicacies.

These oranges are ideal to serve in any way; to peel and eat whole; for all culinary purposes; or for their live, full-bodied, cool, refreshing *juice.*

First-class dealers everywhere sell Sunkist oranges and Sunkist lemons.

This fruit is marketed by the California Fruit Growers Exchange, which accumulates no profits and pays no dividends, but is operated solely for the purpose of raising *better fruit,* of uniform eating quality, and distributing it so economically that it may be sold at reasonable prices everywhere.

Those who buy the food for hospitals can profit by this knowledge. Sunkist are the *reliable* oranges to serve to the ill and convalescent.

CALIFORNIA FRUIT GROWERS EXCHANGE

Co-operative—Non-profit

Eastern Headquarters, Dept. B52, 139 N. Clark St., Chicago



